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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eightieth Meeting
Montreal, 13-17 November 2017

UNDP's WORK PROGRAMME AMENDMENTS FOR 2017

COMMENTS AND RECOMMENDATION OF THE FUND SECRETARIAT

1. UNDP is requesting approval from the Executive Committee of US \$2,927,195 plus agency support costs of US \$233,864 for its 2017 work programme amendments listed in Table 1. The submission is attached to the present document.

Table 1: UNDP's work programme amendments for 2017

Country	Activity/Project	Amount Requested (US \$)	Amount Recommended (US \$)
SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL			
A1: Renewal of institutional strengthening projects			
Costa Rica	Renewal of institutional strengthening project (phase XII)	179,857	179,857
Indonesia	Renewal of institutional strengthening project (phase XI)	347,194	347,194
Malaysia	Renewal of institutional strengthening project (phase XII)	357,760	357,760
Panama	Renewal of institutional strengthening project (phase VIII)	191,360	191,360
Uruguay	Renewal of institutional strengthening project (phase XII)	193,024	193,024
Subtotal for A1		1,269,195	1,269,195
Agency support costs (7 per cent for institutional strengthening) for A1		88,844	88,844
Total for A1		1,358,039	1,358,039
SECTION B: ACTIVITIES RECOMMENDED FOR INDIVIDUAL CONSIDERATION			
B1: Technical assistance for enabling activities (decision 79/46)			
Chile ¹	Enabling activities for HFC phase-down	33,000	*
China ²	Enabling activities for HFC phase-down	165,000	*
Colombia	Enabling activities for HFC phase-down	250,000	*
Costa Rica	Enabling activities for HFC phase-down	150,000	*
Fiji	Enabling activities for HFC phase-down	150,000	*
Jamaica	Enabling activities for HFC phase-down	150,000	*
Lebanon	Enabling activities for HFC phase-down	150,000	*
Peru	Enabling activities for HFC phase-down	150,000	*
Trinidad and Tobago	Enabling activities for HFC phase-down	150,000	*
Uruguay ³	Enabling activities for HFC phase-down	100,000	*
Subtotal for B1		1,448,000	*
Agency support costs (9 per cent for technical assistance)		130,320	*
Total for B1		1,578,320	*
B2: Project preparation for HFC-related projects (decisions 78/3(g) and 79/45)			
China	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	30,000	*
China	Conversion from HFC-245fa to cyclopentane plus HFOs (C5+HFO) in a domestic refrigerator manufacturer	30,000	*
China	Conversion from HFC-134a to HC-290 in a freezer manufacturer (Qingdao Haier)	30,000	*
Dominican Republic	Conversion from HFC-134a to HC-290 in the manufacture of stand-alone, self-contained commercial refrigerators at Farco	30,000	*
Egypt	Conversion from HFC-134a to HFO-1234ze and other liquid HFOs in the manufacture of polyurethane/pour-in-place and spray foam	30,000	*
Zimbabwe	Conversion from HFC-134a to R-600a in the manufacture of domestic refrigerators at Capri	30,000	*
Subtotal for B2		180,000	*
Agency support costs (7 per cent for project preparation)		12,600	*
Total for B2		192,600	*

Country	Activity/Project	Amount Requested (US \$)	Amount Recommended (US \$)
B3: Project preparation for HFC-related projects (decision 79/47)			
China	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	30,000	*
Subtotal for B2		30,000	
Agency support costs (7 per cent for project preparation)		2,100	*
Total for B3		32,100	*
Grand total (A1, B1, B2, B3)		3,161,059	1,358,039

*For individual consideration

¹ UNEP and UNIDO as cooperating agencies

² UNEP as cooperating agency

³ UNIDO as cooperating agency

SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL

A1: Institutional strengthening

Project description

2. UNDP submitted the requests for the renewal of the institutional strengthening (IS) projects for the countries listed in Table 1. The descriptions for these projects are presented in Annex I to the present document.

Secretariat's comments

3. The Secretariat reviewed the requests for the renewal of five IS projects submitted by UNDP on behalf of the Governments concerned against the guidelines and relevant decisions regarding eligibility and funding levels. The requests were cross-checked against the original IS work plan and performance indicators for the previous phase, country programme and Article 7 data, the latest report on implementation of the HCFC phase-out management plan (HPMP), the agency's progress report, and any relevant decisions of the Meeting of the Parties. It was noted that these countries are in compliance with the ODS phase-out targets under the Montreal Protocol and that their annual HCFC consumption does not exceed the annual maximum allowable consumption indicated in their respective HPMP agreements with the Executive Committee. Furthermore, all requests submitted included performance indicators for the planned activities for the next phase of the IS projects in accordance with decision 74/51(e).

Secretariat's recommendations

4. The Secretariat recommends blanket approval of the IS renewal requests for Costa Rica, Indonesia, Malaysia, Panama and Uruguay at the level of funding indicated in Table 1 of this document. The Executive Committee may wish to express to the aforementioned Governments the comments which appear in Annex II to this document.

SECTION B: ACTIVITIES RECOMMENDED FOR INDIVIDUAL CONSIDERATION

B1: Technical assistance for enabling activities (decision 79/46)

Background

5. In line with decision 79/46,¹ UNDP submitted funding requests for the implementation of enabling activities in the 10 Article 5 countries listed in Table 1. The detailed proposals are contained in Annex 2 of UNDP's submission.
6. The enabling activities submitted by the ten countries consist of the following elements:
 - (a) Facilitate coordination of stakeholders to support the early ratification of the Kigali Amendment, and raise awareness on HFC phase-down and energy-efficiency improvement options;
 - (b) Capacity-building and training for alternatives to provide training to the NOU, the governmental stakeholders, servicing sector and end-users for addressing the responsibilities of the Kigali Amendment; identify the needs of modification of existing regulation or creation of new regulation that would facilitate the HFC phase-down; and develop training to address energy-efficiency challenges in installation of new or updating existing RAC systems;
 - (c) Article 4B licensing and reporting to develop the required regulatory package to set up import/export licensing system for HFC and HFC alternatives, including the review of the methodologies related to the collection and verification of ODS data to include HFCs and alternatives; and
 - (d) Preparation of a national strategy for the ratification and implementation of the Kigali Amendment *inter alia* policy, institutional and management framework, HFCs production and consumption, sector profile and analysis, estimated baseline, and the prediction of the growth of HFCs, linkage with HCFC phase-out, and identifying priority areas for HFC phase-down.

Secretariat's comment

7. To facilitate the preparation and submission of requests for enabling activities, the Secretariat prepared a Guide for the submission of enabling activities for HFC phase-down and presented to bilateral and implementing agencies at the Inter-agency coordination meeting.² The Secretariat notes that the requests for enabling activities submitted by UNDP followed the Guide.

8. The Governments of Germany and Italy (as bilateral agencies), and the four implementing agencies, all submitted requests for funding for enabling activities, on behalf of 59 Article 5 countries, in line with decision 79/46. In sub-paragraph (e) of the decision, the Committee decided that requests for enabling activities submitted to the 80th meeting would be funded to the extent possible from additional voluntary contributions provided by non-Article 5 Parties. To facilitate the review and discussion by Committee members, and given the funding modality agreed in decision 79/46(e), the Secretariat has included a list of

¹ The Executive Committee decided *inter alia* to approve enabling activities on the basis that countries would be allowed the flexibility to undertake a range of activities to fulfil their initial obligations in line with the Kigali Amendment; enabling activities could consist of, but were not limited to, activities to: facilitate and support the early ratification of the Kigali Amendment; initiating supporting institutional arrangements; the review of licensing systems; data reporting on HFCs; and demonstration of non-investment activities.

² Montreal, 5-7 September 2017. Bilateral and implementing agencies appreciated the development of the guide.

all the requests for enabling activities submitted to the 80th meeting, indicating funding levels and agencies involved, in the document on the Overview of issues identified during project review.³

9. The Secretariat reviewed the requests for enabling activities and concluded that they fulfilled all the requirements of decision 79/46, as noted below:

- (a) UNDP submitted endorsement letters from the Governments of the ten Article 5 countries indicating their intent to make best efforts to ratify the Kigali Amendment as early as possible;
- (b) The ten project proposals included detailed descriptions of each of the enabling activities, institutional arrangements, cost breakdown and the schedule for implementation; and
- (c) All of the proposals will be implemented in 18 months.

Secretariat's recommendation

10. The Executive Committee may wish to consider the requests for enabling activities for HFC phase-down for the ten Article 5 countries listed in Table 1 above, in the context of its discussion of the proposals for HFC-related projects described in the document on Overview of issues identified during project review (UNEP/OzL.Pro/ExCom/80/22).

B2: Project preparation for HFC-related projects (decision 78/3(g) and 79/45)

Project description

11. UNDP submitted six requests for project preparation for the conversion of HFC to HFO-based or other low-GWP refrigerant in the manufacturing sector in four countries (three projects for China, one each for Dominican Republic, Egypt and Zimbabwe), listed in Table 1 above. Details of the project preparation requests are contained in Annex 3 to UNDP's submission.

Secretariat's comments

12. The Government of Germany (as bilateral agency), and three implementing agencies, submitted requests for funding for preparation of HFC phase-out investment projects in the consumption sector in ten Article 5 countries, and four (fully developed) investment projects for the phase-out of HFC-134a in Argentina⁴, Bangladesh⁵, Colombia⁶ and Mexico,⁷ in line with decisions 78/3⁸ and 79/45.⁹ The Executive

³ UNEP/OzL.Pro/ExCom/80/22.

⁴ UNEP/OzL.Pro/ExCom/80/30.

⁵ UNEP/OzL.Pro/ExCom/80/32.

⁶ UNEP/OzL.Pro/ExCom/80/38.

⁷ UNEP/OzL.Pro/ExCom/80/45.

⁸ The Executive Committee decided *inter alia* to consider approving a limited number of HFC-related projects in the manufacturing sector only, to allow the Committee to gain experience in the incremental capital and operating costs that might be associated with phasing down HFCs, on the understanding: that any country that submitted a project should have ratified the Kigali Amendment or submitted a formal letter indicating the government's intention to ratify the Amendment; that no further funding would be available until the instrument of ratification had been deposited at the United Nations in New York; and that any amount of HFC reduced as a result of the project would be deducted from the starting point.

⁹ The Executive Committee *inter alia* reiterated decision 78/3(g) and decided the following criteria for considering proposals for HFC-related projects: the projects should be in individual enterprises deciding to convert to mature technologies, should have broad replicability to the country or region or sector, and should take into account geographic distribution; projects must be fully implemented by no more than two years; project completion reports

Committee would need to consider all the HFC-related projects proposals submitted to the 80th meeting, noting the criteria for their selection (i.e., technology being proposed, the replicability and the geographic distribution of the proposals) and their funding modality (i.e., to the extent possible, from additional voluntary contributions provided by non-Article 5 Parties, after giving priority to enabling activities¹⁰). To facilitate the review and discussion by Committee members, the Secretariat has included a list of all the HFC-related project proposals submitted to the 80th meeting, indicating a brief description, technology selected, funding levels and agencies involved, in the document on the Overview of issues identified during project review.¹¹

13. With regard to the requests for project preparation for the six HFC phase-out projects, the Secretariat noted that the submissions fulfilled all the requirements of decisions 78/3 and 79/45, and were consistent with relevant decisions related to project preparation funding.

Secretariat's recommendation

14. The Executive Committee may wish to consider the requests for project preparation for conversion from HFC to HFO-based or other low-GWP alternatives in the manufacturing sector in China, Dominican Republic, Egypt and Zimbabwe, listed in Table 1 above, in the context of its discussion of the proposals for HFC-related projects described in the document on Overview of issues identified during project review (UNEP/OzL.Pro/ExCom/80/22).

B3: Project preparation for demonstration projects for HFC-23 by-product mitigation or conversion (decision 79/47)

Project description

15. In line with decision 79/47(g), UNDP submitted a funding request to prepare a demonstration project for HFC-23 by-product conversion at Liaocheng Fuer New Material Technology Ltd., in China, listed in Table 1 above. Details of the project preparation request is contained in Annex 3 to UNDP's submission.

Secretariat's comments

16. The Secretariat noted that the request for project preparation for a technology demonstration project for HFC-23 by-product conversion was consistent with relevant decisions related to project preparation funding, and contained sufficient detail to allow consideration of this request.

17. The Secretariat is seeking the advice of the Executive Committee on the funding source for this request, noting that in decision 79/47(g) funding requests for demonstration projects for HFC-23 emissions controls were to be submitted to the 81st meeting, and that the additional voluntary contributions provided by non-Article 5 Parties, were for enabling activities (as a priority) followed by HFC-related investment projects in the consumption sector.

Secretariat's recommendation

18. The Executive Committee may wish to consider the request for funding the preparation of a technology demonstration project for HFC-23 by-product conversion to valuable organic halides by

should be comprehensive with detailed information on the eligible incremental capital costs, incremental operating costs, any possible savings incurred during the conversion and relevant factors that facilitated implementation.

¹⁰ Decision 79/45(d).

¹¹ UNEP/OzL.Pro/ExCom/80/22.

reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd., in China in light of the Secretariat's comments.

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

Costa Rica: Renewal of institutional strengthening

Summary of the project and country profile		UNDP
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Oct-92	213,160
Phase II:	Feb-97	108,087
Phase III:	Mar-99	108,087
Phase IV:	Dec-01	108,087
Phase V:	Dec-03	140,513
Phase VI:	Nov-05	140,513
Phase VII:	Nov-07	140,513
Phase VIII:	Nov-09	140,513
Phase IX:	Nov-11	140,514
Phase X:	Dec-13	140,513
Phase XI:	Nov-15	179,857
Total:		1,560,357
Amount requested for renewal (phase XII) (US \$):		179,857
Amount recommended for approval for phase XII (US \$):		179,857
Agency support costs (US \$):		12,590
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		192,447
Date of approval of country programme:		1992
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		14.1
Annex E (methyl bromide) (average 1995-1998)		342.5
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		10.89
Annex E (methyl bromide)		0.0
Total:		10.89
Year of reported country programme implementation data:		2016
Amount approved for projects (as at July 2017) (US \$):		11,566,101
Amount disbursed (as at December 2016) (US \$):		10,817,653
ODS to be phased out (as at July 2017) (ODP tonnes):		805.9
ODS phased out (as at December 2016) (ODP tonnes):		794.5

1. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	7,527,504
(b) Institutional strengthening:	1,560,357
(c) Project preparation, technical assistance, training and other non-investment projects:	2,478,240
Total:	11,566,101

Progress report

2. Phase XI of the IS project for Costa Rica was implemented by the Ozone Technical Office (OTO) attached to the Directorate of Environmental Quality Management (DIGECA) of the Ministry of Environment and Energy (MINAE). The country controlled the import and export of HCFCs and HFC refrigerants through an online system. Imports and exports of ODS and ODS-based equipment were monitored and controlled in coordination with “Procomer”, the agency in charge of exports, and the Directorate General of Customs. The establishment of an HFC licensing system improved the ability to track those substances. Costa Rica reported country programme data in advance of the 1 May deadline, and participated in regional network and international meetings. The country promoted awareness of ozone layer protection matters and the OTO also initiated the preparation of online course on protection of the ozone layer for teachers. Costa Rica submitted its ODS alternatives survey, and the fourth tranche of the HPMP to the 80th meeting and achieved the targets set in the performance indicators.

Plan of action

3. During phase XII of the IS project the OTO will continue to control imports of HCFC and their alternatives and equipment containing them in order to continue the phase-out of HCFCs and will also focus on completing the process to ratify the Kigali Amendment. Other activities will include: country programme and Article 7 data reporting; training of fiscal police to identify illegal imports; assessing the viability of a system to automatically capture ODS import data from “Procomer”; meetings of the steering committee to monitor the progress of Montreal Protocol activities; dissemination of information on the Kigali Amendment; coordination of HPMP activities; training and sensitizing of importers and consumers of refrigeration and air-conditioning (RAC) equipment; and, awareness raising. The online course for teachers on protection of the ozone layer will be completed.

Indonesia: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNDP
Amounts previously approved for institutional strengthening (US \$):			
Phase I:	Jun-93		314,780
Phase II:	Nov-97		208,650
Phase III:	Dec-00		208,650
Phase IV:	Dec-03		271,245
Phase V:	Nov-05		271,245
Phase VI:	Nov-07		271,245
Phase VII:	Nov-09		271,246
Phase VIII:	Nov-11		271,246
Phase IX:	Dec-13		271,246
Phase X:	Nov-15		347,194
	Total:		2,706,747
Amount requested for renewal (phase XI) (US \$):			347,194
Amount recommended for approval for phase XI (US \$):			347,194
Agency support costs (US \$):			24,304
Total cost of institutional strengthening phase XI to the Multilateral Fund (US \$):			371,497
Date of approval of country programme:			1994
Date of approval of HCFC phase-out management plan:			2011
Baseline consumption of controlled substances (ODP tonnes):			
Annex B, Group III (methyl chloroform) (average 1998-2000)			13.3
Annex C, Group I (HCFCs) (average 2009-2010)			403.9
Annex E (methyl bromide) (average 1995-1998)			40.7

Summary of the project and country profile	
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:	
Annex B, Group III (methyl chloroform)	0.0
Annex C, Group I (HCFCs)	244.66
Annex E (methyl bromide)	0.0
Total:	244.66
Year of reported country programme implementation data:	2016
Amount approved for projects (as at July 2017) (US \$):	79,440,243
Amount disbursed (as at December 2016) (US \$):	63,837,076
ODS to be phased out (as at July 2017) (ODP tonnes):	10,436.0
ODS phased out (as at December 2016) (ODP tonnes):	10,635.3

4. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	67,116,170
(b) Institutional strengthening:	2,706,747
(c) Project preparation, technical assistance, training and other non-investment projects:	9,617,326
Total:	79,440,243

Progress report

5. The country took measures to support the implementation of legislation to control and monitor HCFCs, customs officers' training, the development and launch of an innovative Android-based application for monitoring refrigerants in 24 provinces. The NOU prioritized enforcement and monitoring activities to ensure compliance with the Protocol, and coordination with stakeholders to implement the HPMP, and submitted country programme and Article 7 data to the Fund and Ozone Secretariats, respectively. Products were developed and distributed to raise awareness of ozone protection. Of the five performance indicators set by the NOU, targets for four were fully achieved and one related to the timely submission of country programme data was partially achieved.

Plan of action

6. Funds from phase XI of the IS project will provide support for completion of stage I of the HPMP and implementation of stage II through enforcement of policies, strategies, control measures, technical assistance and monitoring mechanisms, cooperation with stakeholders, and public awareness. Phase XI will also support the implementation of enabling activities for the Kigali Amendment thereby preparing the country for HFC phase-down. The NOU will ensure the timely submission of relevant data to the Fund and Ozone Secretariats and participate in regional network meetings, and Montreal Protocol meetings.

Malaysia: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Mar-93	322,520
Phase II:	Oct-96	215,000
Phase III:	Nov-98	215,000
Phase IV:	Dec-00	215,000
Phase V:	Nov-02	279,500
Phase VI:	Dec-04	279,500
Phase VII:	Nov-07	279,500

Summary of the project and country profile			
	Phase VIII:	Jul-09	279,500
	Phase IX:	Jul-11	279,500
	Phase X:	Jul-13	279,500
	Phase XI:	Nov-15	357,760
		Total:	3,002,280
Amount requested for renewal (phase XII) (US \$):			357,760
Amount recommended for approval for phase XII (US \$):			357,760
Agency support costs (US \$):			25,043
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):			382,803
Date of approval of country programme:			1992
Date of approval of HCFC phase-out management plan:			2011
Baseline consumption of controlled substances (ODP tonnes):			
Annex B, Group III (methyl chloroform) (average 1998-2000)			49.05
Annex C, Group I (HCFCs) (average 2009-2010)			515.8
Annex E (methyl bromide) (average 1995-1998)			14.6
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:			
Annex B, Group III (methyl chloroform)			0.0
Annex C, Group I (HCFCs)			318.62
Annex E (methyl bromide)			0.0
			Total:
			318.62
Year of reported country programme implementation data:			2016
Amount approved for projects (as at July 2017) (US \$):			63,158,498
Amount disbursed (as at December 2016) (US \$):			54,965,140
ODS to be phased out (as at July 2017) (ODP tonnes):			6,983.6
ODS phased out (as at December 2016) (ODP tonnes):			6,778.7

7. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	51,936,820
(b) Institutional strengthening:	3,002,280
(c) Project preparation, technical assistance, training and other non-investment projects:	8,219,398
Total:	63,158,498

Progress report

8. Malaysia managed and monitored activities to sustain ODS phase-out and ensure compliance with the Protocol. The NOU worked closely with other national agencies and stakeholders to ensure monitoring of ODS phase-out and implemented activities for awareness and training of stakeholders. The NOU is in the process of completing the remaining activities under stage I of the HPMP and has initiated activities under stage II that was approved in November 2016. Malaysia participated in regional network meetings. The targets of all six performance indicators set by the NOU were fully achieved.

Plan of action

9. Malaysia will focus on coordination of three major activities: completion of stage I of the HPMP, implementation of stage II, and preparations for HFC phase-down. Malaysia will continue implementation of ODS phase-out activities through enforcement of policies, strategies, control measures, technical assistance and monitoring mechanisms. The IS project will support monitoring activities under stage II including the investment project in the foam sector, technical assistance in the RAC sector, and regulations and measures to control HCFC consumption. The country also plans to initiate enabling activities for ratification of the Kigali Amendment.

Panama: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Jul-93	172,500
Phase II:	Jul-00	115,000
Phase III:	Nov-02	149,500
Phase IV:	Dec-04	149,500
Phase V:	Nov-11	149,500
Phase VI:	Dec-13	149,500
Phase VII:	Nov-15	191,360
	Total:	1,076,860
Amount requested for renewal (phase VIII) (US \$):		191,360
Amount recommended for approval for phase VIII (US \$):		191,360
Agency support costs (US \$):		13,395
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US \$):		204,755
Date of approval of country programme:		1993
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		24.8
Annex E (methyl bromide) (average 1995-1998)		0.0
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		18.35
Annex E (methyl bromide)		0.0
	Total:	18.35
Year of reported country programme implementation data:		2016
Amount approved for projects (as at July 2017) (US \$):		4,321,618
Amount disbursed (as at December 2016) (US \$):		3,335,305
ODS to be phased out (as at July 2017) (ODP tonnes):		245.0
ODS phased out (as at December 2016) (ODP tonnes):		241.6

10. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,820,993
(b) Institutional strengthening:	1,076,860
(c) Project preparation, technical assistance, training and other non-investment projects:	1,423,765
Total:	4,321,618

Progress report

11. Panama increased its capacity to facilitate implementation of all Montreal Protocol related projects. The NOU, which is part of the Ministry of Health, managed activities to ensure the country's compliance with the Montreal Protocol and sustain ODS phase-out. The HCFC quota system gave the NOU quick access to reliable data on ODS import and export. Import measures were enforced through strengthening the coordination and exchange of information with the National Customs Authority and monitoring procedures to prevent irregularities in the ODS trade. Stage I of the HPMP was completed in 2016 and activities in stage II were initiated despite a delay due to administrative procedures. Sound reporting systems are in place and the NOU has ensured synergies between the activities of relevant stakeholders. Training, information dissemination and awareness activities increased the competencies of custom officers

and other governmental officials, refrigerant importers, RAC technicians, primary and high school teachers, and children. The NOU concluded the final report of the national ODS alternatives survey. Panama set 12 performance indicators, all of which were fully achieved. Panama participated in regional and international meetings of the Montreal Protocol. With regard to the Kigali Amendment, the NOU began to strengthen links with the Ministry of Environment, National Energy Secretariat, Ministry of Commerce and Industries, and Panama Fire Department. It has also been working closely with Ministry of Foreign Affairs, with a view to obtaining the approval by the Executive Body and the General Assembly of Deputies for the ratification of the Kigali Amendment.

Plan of action

12. Panama will continue its efforts to fulfill its obligations under the Montreal Protocol and will focus on a series of activities including: ensuring the sustainability of the phase-out and compliance with the Protocol's control measures; strengthening of legislation; supporting industry and commerce to adopt ODS alternative substances and technologies; maintaining public awareness activities, especially those targeting illegal ODS trade; timely submission of data reports to the Fund and Ozone Secretariats; and attendance at Montreal Protocol meetings. The NOU will coordinate and monitor the implementation of stage II of the HPMP including projects in the foam and RAC servicing sectors, and the regulations and measures to control HCFC consumption. Panama aims to ratify the Kigali Amendment by the end of 2018.

Uruguay: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
	Jun-93 & May-96	
Phase I:	202,800	
Phase II:	116,000	
Phase III:	116,000	
Phase IV:	116,000	
Phase V:	150,800	
Phase VI:	150,800	
Phase VII:	150,800	
Phase VIII:	150,800	
Phase IX:	150,800	
Phase X:	150,800	
Phase XI:	193,024	
	Total:	1,648,624
Amount requested for renewal (phase XII) (US \$):		193,024
Amount recommended for approval for phase XII (US \$):		193,024
Agency support costs (US \$):		13,512
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		206,536
Date of approval of country programme:		1993
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		23.4
Annex E (methyl bromide) (average 1995-1998)		11.2
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		16.43
Annex E (methyl bromide)		0.0
Total:		16.43

Summary of the project and country profile	
Year of reported country programme implementation data:	2016
Amount approved for projects (as at July 2017) (US \$):	8,261,541
Amount disbursed (as at December 2016) (US \$):	6,944,117
ODS to be phased out (as at July 2017) (ODP tonnes):	527.6
ODS phased out (as at December 2016) (ODP tonnes):	444.6

13. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	4,098,144
(b) Institutional strengthening:	1,648,624
(c) Project preparation, technical assistance, training and other non-investment projects:	2,514,773
Total:	8,261,541

Progress report

14. The NOU continued implementation of the quota system which helped to maintain HCFC imports below the HPMP reduction targets. Data gathering measures implemented by the NOU provided complete and reliable information on imports of HCFC and HCFC-based equipment. The NOU maintained good communication with stakeholders, and reported 2015 and 2016 country programme data in advance of the 1 May deadline. The NOU coordinated the completion of stage I of the HPMP, initiated the implementation of stage II, and submitted the report on the ODS alternative survey. The country participated in all regional and international Montreal Protocol meetings. The ministerial authorities agreed to initiate the process to ratify the Kigali Amendment. Uruguay achieved the targets in the 14 performance indicators that were set in the work plan of phase XI of the IS project.

Plan of action

15. The Legal Office of the Ministry of Housing, Land Planning and Environment is expected to provide additional professional staff support to the NOU to strengthen the legal framework. Resources from stage II of the HPMP will be used to support the IS project in terms of technical training and revision and strengthening of the legal framework. The NOU will work with public and private entities to enforce HCFC consumption control measures and coordinate activities including investment projects, a training programme on good refrigeration practices, and continuous public awareness activities. The country will initiate the internal process for the ratification of the Kigali Amendment. Uruguay will continue to participate in regional network and international Montreal Protocol meetings.

Annex II

DRAFT VIEWS EXPRESSED BY THE EXECUTIVE COMMITTEE ON RENEWAL OF INSTITUTIONAL STRENGTHENING PROJECTS SUBMITTED TO THE 80th MEETING

Costa Rica

1. The Executive Committee reviewed the report submitted with the request for the IS project for Costa Rica (phase XII) and noted with appreciation that the country had reported 2015 and 2016 data to the Ozone Secretariat indicating that Costa Rica is in compliance with the Montreal Protocol, and had also reported country programme implementation data to the Fund Secretariat in advance of the 1 May deadline. The Committee further noted with appreciation that Costa Rica undertook preparatory activities to facilitate the implementation of the Kigali Amendment including the early establishment of a licensing system for HFCs. The Executive Committee acknowledged the efforts of the Government of Costa Rica to implement its Montreal Protocol activities and is therefore hopeful that, within the next two years, the Government will continue implementation of stage II of the HPMP and IS project with success in order to achieve the 35 per cent reduction in HCFC consumption required under the Montreal Protocol by 1 January 2020.

Indonesia

2. The Executive Committee reviewed the report presented with the request for the IS project for Indonesia (phase XI) and noted with appreciation the efforts of the Government to monitor and control ODS phase-out through various policy and regulatory activities along with awareness raising activities. The Executive Committee also noted the Government's coordination with national agencies and stakeholders in managing and monitoring of the implementation of the HPMP. The Executive Committee is hopeful that in phase XI of the IS project the Government of Indonesia will continue the implementation of stage II of the HPMP and IS project with success to prepare the country to achieve compliance with the 35 per cent reduction in HCFC consumption required under the Montreal Protocol by 1 January 2020, and will initiate activities to assist the country to ratify the Kigali Amendment.

Malaysia

3. The Executive Committee reviewed the report presented with the request for the IS project for Malaysia (phase XII) and noted with appreciation that Malaysia had submitted 2016 Article 7 data indicating that the country was in compliance with the Montreal Protocol. The Executive Committee further noted that the Government of Malaysia has taken effective steps to phase out ODS consumption including implementation of HCFC import control through the licensing and quota system, HCFC phase-out in the foam sector, and awareness and training of stakeholders as part of stage I of the HPMP, initiation of activities of stage II. The Executive Committee acknowledged the efforts of the Government of Malaysia and is therefore hopeful that, within the next two years, that the Government will continue implementation of stage II of the HPMP and IS project activities with success.

Panama

4. The Executive Committee reviewed the report submitted with the request for the IS project for Panama (phase VIII) and noted with appreciation that the Government of Panama reported Article 7 data indicating that the country is in compliance with the Montreal Protocol and that the country reported country programme implementation data to the Fund Secretariat in advance of the prescribed deadline. The Executive Committee further noted that Panama has taken steps to phase out ODS consumption, in particular, implementation of HCFC imports controls through the licensing and quota system, and training of customs officers and refrigeration technicians. The Executive Committee also noted with appreciation the preparatory activities to facilitate the implementation of the Kigali Amendment. The Executive

Committee acknowledged the efforts of the Government of Panama and is therefore hopeful that, within the next two years, the Government will continue implementation of stage II of the HPMP and IS project activities with success in order to achieve the 35 per cent reduction in HCFC consumption required under the Montreal Protocol by 1 January 2020.

Uruguay

5. The Executive Committee reviewed the report presented with the request for the IS project for Uruguay (phase XII) and noted with appreciation that the country reported 2015 and 2016 data to the Ozone Secretariat indicating that the country in compliance with the Montreal Protocol, and 2015 and 2016 country programme implementation data to the Fund Secretariat. The Executive Committee further noted that the Government of Uruguay is implementing HCFC imports controls through the licensing and quota system and establishing communication channels between the national ozone unit, customs authorities and other local authorities. The Committee noted with appreciation the initiation of stage II of the HPMP and the preparatory activities to facilitate the implementation of the Kigali Amendment. The Executive Committee acknowledged the efforts of the Government of Uruguay and is therefore hopeful that, within the next two years, the Government will continue implementation of stage II of the HPMP and IS project activities with success in order to achieve the 35 per cent reduction in HCFC consumption required under the Montreal Protocol by 1 January 2020.



*Empowered lives.
Resilient nations.*

**80th Meeting of the Executive Committee of the Multilateral Fund
for the Implementation of the Montreal Protocol**

(13 – 17 November 2017)

**UNDP
2017 WORK PROGRAMME AMENDMENT**

2017 WORK PROGRAMME AMENDMENT

I. EXECUTIVE SUMMARY

The present document constitutes UNDP's 2017 Work Programme Amendment and is being submitted for consideration of the Executive Committee (ExCom) at its 80th Meeting. The list of submissions for all funding requests (including investment projects) that will be submitted by UNDP to the 80th ExCom meeting in Annex 1 to this document is provided for information. Project documentation such as multi-year agreements (MYA) tranche requests, investment and demonstration projects and other individual/investment proposals, are not included in this document and are submitted separately as per normal practice. Only the following (non-investment) submissions are part of this document.

II. FUNDING REQUESTS PART OF THE WORK PROGRAMME

Institutional Strengthening Extensions

Requests for funding of extensions of institutional strengthening projects included in this document for submission at the 80th ExCom Meeting are tabulated below. The documents with terminal reports and requests for extension of IS funding are being submitted separately.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Costa Rica	INS	Institutional Strengthening Renewal (Phase XII)	24	179,857	12,590	192,447
Indonesia	INS	Institutional Strengthening Renewal (Phase XI)	24	347,194	24,304	371,498
Malaysia	INS	Institutional Strengthening Renewal (Phase XII)	24	357,760	25,043	382,803
Panama	INS	Institutional Strengthening Renewal (Phase VIII)	24	191,360	13,395	204,755
Uruguay	INS	Institutional Strengthening Renewal (Phase XI)	24	193,024	13,512	206,536
Total (5 requests)				1,269,195	88,844	1,358,039

Requests for enabling activities

UNDP is submitting 10 requests for enabling activities as per the table below. The associated requests are included in Annex 2.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	TAS	Enabling activities for Kigali Amendment	18	33,000	2,970	35,970
China	TAS	Enabling activities for Kigali Amendment	18	165,000	14,850	179,850
Colombia	TAS	Enabling activities for Kigali Amendment	18	250,000	22,500	272,500
Costa Rica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Fiji	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Jamaica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Lebanon	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Peru	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Trinidad and Tobago	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Uruguay	TAS	Enabling activities for Kigali Amendment	18	100,000	9,000	109,000
Total (10 requests)				1,448,000	130,320	1,578,320

Requests for preparation funding for HFC Investment projects

UNDP is submitting 7 requests for the preparation of HFC investment projects as per the table below. The associated requests for preparation funds are included in Annex 3.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	12	30,000	2,100	32,100
China	PRP	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	12	30,000	2,100	32,100
Dominican Republic	PRP	Conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco	12	30,000	2,100	32,100
Egypt	PRP	Elimination of HFC in the manufacture of PU Foam	12	30,000	2,100	32,100
Zimbabwe	PRP	Elimination of HFC-134a in the manufacture of domestic refrigerators	12	30,000	2,100	32,100
Total (7 requests)				210,000	14,700	224,700

III. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME AMENDMENT)

The table below summarizes the funding requests for non-investment activities and proposals, as part of UNDP's Work Programme Amendment for 2017, submitted to the 80th ExCom Meeting:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	TAS	Enabling activities for Kigali Amendment	18	33,000	2,970	35,970
China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	12	30,000	2,100	32,100
China	PRP	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	12	30,000	2,100	32,100

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
China	TAS	Enabling activities for Kigali Amendment	18	165,000	14,850	179,850
Colombia	TAS	Enabling activities for Kigali Amendment	18	250,000	22,500	272,500
Costa Rica	INS	Institutional Strengthening Renewal (Phase XII)	24	179,857	12,590	192,447
Costa Rica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Dominican Republic	PRP	Conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco	12	30,000	2,100	32,100
Egypt	PRP	Elimination of HFC in the manufacture of PU Foam	12	30,000	2,100	32,100
Fiji	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Indonesia	INS	Institutional Strengthening Renewal (Phase XI)	24	347,194	24,304	371,498
Jamaica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Lebanon	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Malaysia	INS	Institutional Strengthening Renewal (Phase XII)	24	357,760	25,043	382,803
Panama	INS	Institutional Strengthening Renewal (Phase VIII)	24	191,360	13,395	204,755
Peru	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Trinidad and Tobago	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Uruguay	INS	Institutional Strengthening Renewal (Phase XI)	24	193,024	13,512	206,536
Uruguay	TAS	Enabling activities for Kigali Amendment	18	100,000	9,000	109,000
Zimbabwe	PRP	Elimination of HFC-134a in the manufacture of domestic refrigerators	12	30,000	2,100	32,100
Total (22 requests)				2,927,195	233,864	3,161,059

ANNEX 1

List of all UNDP submissions for funding to the 80th ExCom Meeting

No	Country	Type	Description	Funding Request for the 80 th ExCom (US\$)		
				Amount	Agency Fee	Total
1	Bangladesh	INV	Conversion from HFC-134a to isobutane in manufacturing household refrigerator at Walton Hi-Tech Industries Limited	3,131,610	219,213	3,350,823
2	Barbados	PHA	Stage I HPMP - 2nd tranche	38,000	3,420	41,420
3	Brazil	PHA	Stage II HPMP - 2nd tranche	6,037,509	422,626	6,460,134
4	Chile	TAS	Enabling activities for Kigali Amendment	33,000	2,970	35,970
5	China	PHA	HPMP Stage II - ICR 2nd tranche	20,000,000	1,300,000	21,300,000
6	China	PHA	HPMP Stage II - Solvent 2nd tranche	3,777,190	245,517	4,022,707
7	China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	30,000	2,100	32,100
8	China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	30,000	2,100	32,100
9	China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	30,000	2,100	32,100
10	China	PRP	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	30,000	2,100	32,100
11	China	TAS	Enabling activities for Kigali Amendment	250,000	22,500	272,500
12	Colombia	TAS	Enabling activities for Kigali Amendment	250,000	22,500	272,500
13	Colombia	INV	Conversion from HFC-134a to isobutane in the manufacture of domestic refrigerators at Mabe Colombia	3,024,067	211,685	3,235,752
14	Costa Rica	PHA	Stage I HPMP - 4th tranche	106,000	7,950	113,950
15	Costa Rica	INS	Institutional Strengthening Renewal (Phase XII)	179,857	12,590	192,447
16	Costa Rica	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
17	Dominican Republic	PRP	Conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco	30,000	2,100	32,100
18	DR of the Congo	PHA	Stage I HPMP - 3rd tranche	24,000	2,160	26,160
19	Egypt	PRP	Elimination of HFC in the manufacture of PU Foam	30,000	2,100	32,100
20	Fiji	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
21	Indonesia	INS	Institutional Strengthening Renewal (Phase XI)	347,194	24,304	371,498
22	Jamaica	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
23	Lebanon	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
24	Malaysia	INS	Institutional Strengthening Renewal (Phase XII)	357,760	25,043	382,803
25	Mauritania	PHA	Stage I HPMP - 1st tranche	105,000	7,350	112,350
26	Mexico	INV	HCFC phase-out in the production of refrigerators at MABE Mexico	2,000,000	140,000	2,140,000
27	Nigeria	PHA	Stage II HPMP - 1st tranche	3,047,345	213,314	3,260,659
28	Panama	INS	Institutional Strengthening Renewal (Phase VIII)	191,360	13,395	204,755
29	Peru	PHA	Stage II HPMP - 1st tranche	606,475	42,453	648,928
30	Peru	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
31	Timor-Leste	PHA	Stage II HPMP - 1st tranche	70,000	6,300	76,300
32	Timor-Leste	PHA	Stage I HPMP - 2nd tranche	10,680	961	11,641

No	Country	Type	Description	Funding Request for the 80th ExCom (US\$)		
				Amount	Agency Fee	Total
33	Trinidad and Tobago	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
34	Uruguay	INS	Institutional Strengthening Renewal (Phase XI)	193,024	13,512	206,536
35	Uruguay	TAS	Enabling activities for Kigali Amendment	100,000	9,000	109,000
36	Zimbabwe	PRP	Elimination of HFC-134a in the manufacture of domestic refrigerators	30,000	2,100	32,100
Total (36 requests)				44,990,071	3,064,463	48,054,533

Notes:

- a. All amounts in are in US dollars.
- b. Special reports due (delays, balances, status reports, etc.) as well as other projects not part of the WPA will be submitted separately.

ANNEX 2

Funding requests for enabling activities in:

**Chile
China
Colombia
Costa Rica
Fiji
Jamaica
Lebanon
Peru
Trinidad and Tobago
Uruguay**

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY: Chile

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY(IES): UNIDO, UN Environment (UNEP)

NATIONAL COORDINATION AGENCY: MINISTRY OF ENVIRONMENT / NATIONAL OZONE UNIT
(UNIDAD NACIONAL DE OZONO)

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION: 18 months

PROJECT COST: USD 150,000

SUPPORT COST: (7% for UNDP and UNIDO and 13% for UNEP) USD 14,740

TOTAL COST FOR THE MLF: USD 160,500

1. Background

On behalf of the Government of Chile, UNDP as leader agency, with UN Environment and UNIDO as cooperating agencies, submit this Project request, to facilitate and support the country early ratification of the Kigali Amendment and to undertake specific initial activities that help them fulfil their initial obligations with regard to hydrofluorocarbon (HFC) phase-down in line with the Kigali Amendment, according to Executive Committee decision 79/46. Based on that decision, eligible funding for enabling activities in Chile are US\$ 150,000.

2. Country ODS policy and Compliance Status

Chile is a party to the Montreal Protocol (MP), operating under paragraph 1 of Article 5. The Ozone Unit of the Ministry of Environment acts as the country's Focal Point for the MP, coordinating and implementing efforts to reduce and eliminate ODSs, in close cooperation with public and private sector stakeholders.

The country ratified the Vienna Convention (Mar. 1990), the Montreal Protocol (Mar. 1989) and its Amendments in London (Apr. 1992), Copenhagen (Jan. 1994), Vienna (1996), Montreal (Jun. 1998), Beijing (May 2000), and is classified as a party operating under paragraph 1 of Article 5 of the Protocol.

Furthermore, the Ministry of Environment of Chile in coordination with the Ministry of Foreign Affairs are working in the ratification of the Kigali Amendment to the MP. The Government of Chile is making its best efforts to ratify the Kigali Amendment as early as possible.

The institutional framework is spearheaded by the Ozone Unit (NOU) of the Ministry of Environment, which coordinates all activities and regulations for compliance with the MP. In this task, it cooperates with public bodies such as the Ministries of Health, Foreign Affairs, the Economy, Financing, and Education, as well as public services such as the Agriculture and Livestock Service (SAG), the Office for Agrarian Policies and Studies (ODEPA) and the National Customs Service; and bodies such as the Chilean Chamber of Refrigeration and Air Conditioning and educational institutions that teach professional programs in refrigeration.

The legal framework for controlling ozone-depleting substances (ODS) is based on Law 20096¹², known as the “Ozone Law”, which came into force on March 23, 2006, and establishes control mechanisms that apply to all ODS, together with measures for outreach, evaluation, prevention, and protection from ultraviolet radiation.

The Ozone Law establishes the general framework for ODS control, covering pure substances, mixtures, and substances contained in products. It also allows decisions and commitments to be made within the framework of the Montreal Protocol (MP).

Under this instrument and through the application of HFC control measures, including as stipulated in the Kigali Amendment to the MP, the country has the regulatory footing to prepare sector-based control measures for import and export of these substances, including a schedule for reduction and corresponding maximum import volumes.

In parallel, the Ministry of Environment keeps the Pollutant Release and Transfer Registry (PRTR), which implements a registry of equipment/products that contain ODS, in which importers and exporters must declare applicable operations. Its objective is to compile a source of information to allow control measures and import reduction mechanisms to be established in the future.

The regulations on the Ozone Law (Supreme Decree 75/2012, MINSEGPRES¹³) stipulate a number of measures that facilitate the introduction of alternatives to HCFCs, including discounting quantities of HCFCs that are no longer used following conversion processes. Its objective is to eliminate the consumption of these substances based on the country MP goal and to support efforts made by major users to convert their production processes.

The NOU is also promoting efforts to convert equipment that uses HFCs to non-HFC alternatives, with a particular emphasis on natural refrigerants, such as hydrocarbons and transcritical CO₂. The same is true for the rigid polyurethane foam sector which will be implemented under HPMP Stage II alongside projects that are already underway, as the introduction of transcritical CO₂ technology in Chilean supermarkets, financed by the Climate and Clean Air Coalition (CCAC)¹⁴ and HPMP Phase I.

The national regulatory framework for ODS control classes HCFCs as controlled substances, so under MINSEGPRES Supreme Decree 75/2012 importers must be registered in the Registry of ODS Importers and Exporters (i.e. the licensing system), which allocates each an annual individual maximum import volume (i.e. quota), calculated based on ODS consumption goals established in that Decree. Quotas and licenses are allocated in accordance with the criteria specified in MINSEGPRES Supreme Decree 75/2012.

For implementation, the National Customs Service is tasked with overseeing and enforcing substances imported and exported; the Ministry of Health oversees substances that constitute health hazards; and the Ministry of the Economy regulates labelling of equipment and products that contain HCFCs.

Finally, as indicated in the Ozone Law (N° 20096/2006), the regulatory framework described above is applicable for extension to cover control over HFCs within the framework of the Kigali Amendment, approved at the 28th Meeting of Parties to the MP.

¹² Law 20,096 of the Ministry General Secretariat of the Presidency, published in the Official Gazette on March 23, 2006, establishes control mechanisms for ozone-depleting substances.

¹³ Supreme Decree 75, published in the Official Gazette on December 11, 2012, Ministry General Secretariat of the Presidency This instrument approves regulations that establish standards applicable to imports and exports of ozone-depleting substances, maximum import volumes and distribution criteria.

¹⁴ Reference: <http://portal.mma.gob.cl/ministerio-del-medio-ambiente-implementa-en-supermercado-de-valdivia-inedito-sistema-de-refrigeracion-con-co2-transcritico-en-chile/>

The National Customs Service and the NOU jointly modified the customs tariffs and specific descriptors for HCFCs and HFCs (pure substances, blends, equipment, and products), thus aiding in their identification when imported and exported. This also ensures that the system remains up to date in accordance with changes in technology or with patterns in international trade¹⁵.

The country has expressed consistent support for the Kigali Amendment to the Montreal Protocol since negotiations began. Currently the Government of Chile is at its last stages of the ratification process, in order to deposit the ratification in the near future.

3. Projects funded by the Multilateral Fund

The Stage I of the HCFC Phase-out Management Plan (HPMP-I) for Chile was approved at the 63rd meeting of Executive Committee. As was established in the updated Agreement between the Government of Chile and the Executive Committee (ExCom) at its 76th meeting, the country will finalize this stage at December 2017.

The Stage II HPMP (HPMP-II) for Chile was approved in May 2016 at the 76th Meeting of the Executive Committee. The project was approved in accordance with the Agreement between the Government and the ExCom for the period 2016 to 2021 to reduce HCFC consumption to 45 percent of its baseline by 2020 and 65 percent of its baseline by 2021. Likewise, the government committed to issue a ban on the import and use of HCFC-141b for the polyurethane foam manufacturing sector and on imports and exports of HCFC-141b contained in pre-blended polyols.

Chile is successfully achieved more than 10% of HCFCs reduction in 2016. The country baseline was 87.5 ODP tonnes and 63.33 ODP tonnes are reported as consumption in 2016.

Currently, the country is implementing the first tranche of Stage II HPMP and has achieved the following results:

- Training courses on introduction to natural refrigerants (7 courses).
- Training course (stage 2) on Best Refrigeration Practices (1 course).
- Train-the-trainers course and workshop on Safe Management of hydrocarbons refrigerants in R&AC, for teachers and technical advisors.
- Seminars on HPMP Stage II activities and trending in uses of ODS refrigerants and its alternatives, on Expo Frio-Calor Sur (2 seminars to technicians) and Instituto Tecnológico de la Universidad Católica de la Santísima Concepción (1 seminar to students).

In this regard, the NOU has also been developing the following complementary activities which contribute to limit the HFC growth in the country:

- Survey on ODS alternatives (HFCs and others);
- Update of the Chilean Standard on “Best Refrigeration Practices” and the elaboration of the new standard on “Best Practices in R&AC systems using flammable refrigerants”;
- National inventory of HFC.

Likewise, Chile also signed the Paris Agreement on September 20, 2016, with a commitment to reduce CO₂ emissions per unit GDP by 30% from levels recorded in 2007, by 2030¹⁶. This Agreement was ratified by the National Congress (Apr. 2017). On ratifying it, the country will reduce GHG emissions and promote the use of alternatives to HFCs, in recognition of its vulnerability to the effects of climate

¹⁵ Reference: Official Gazette of the Republic of Chile, Section I, Wednesday, December 28, 2016.

¹⁶ Reference: <http://www.gob.cl/2015/09/29/asamblea-general-de-la-onu-chile-compromete-reduccion-de-un-30-de-emision-de-gases-de-efecto-invernadero-al-ano-2030/>, accessed January 20, 2017.

change, such as flooding, extreme heat, and declining water availability¹⁷.

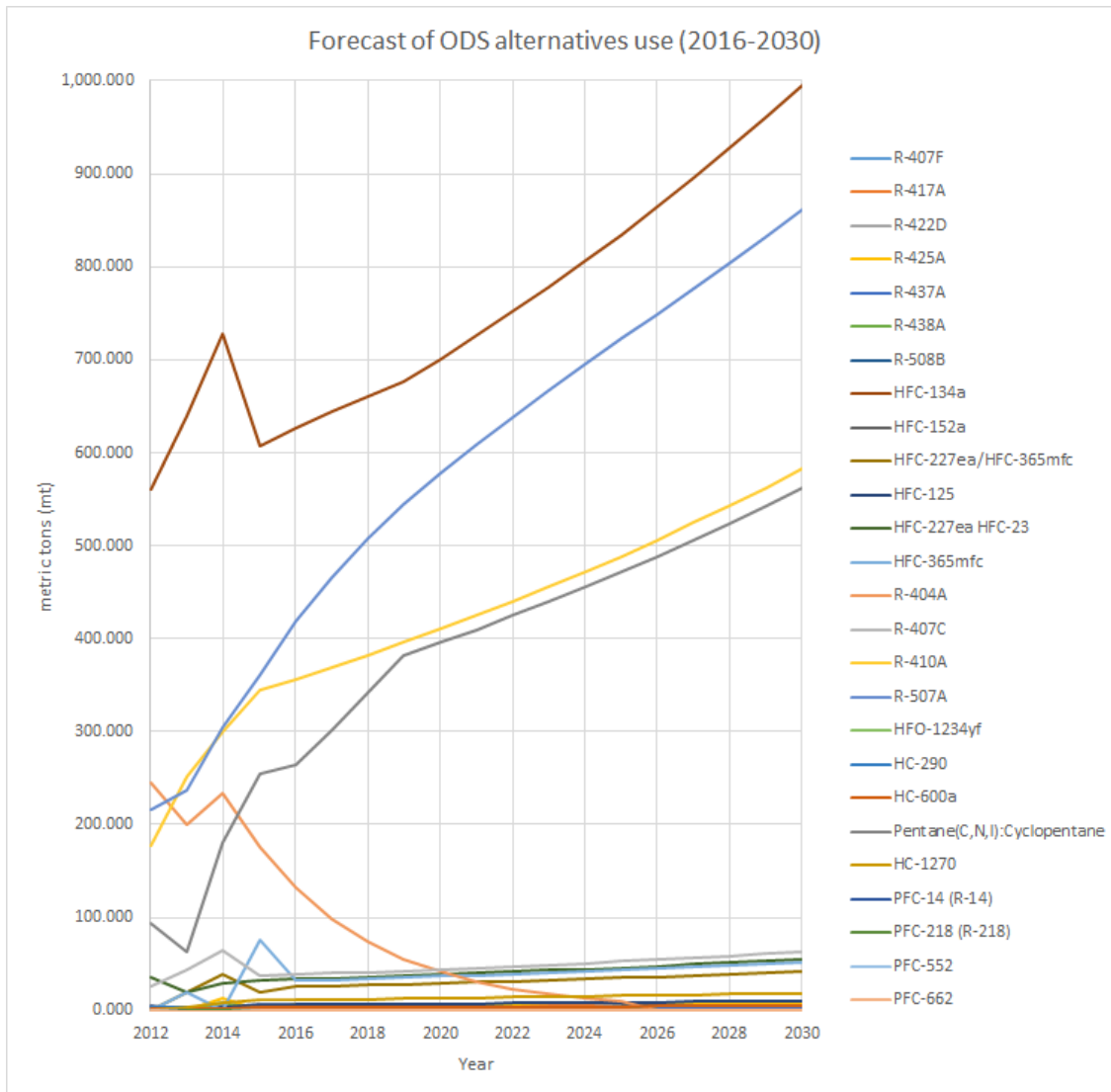
The country has also successfully concluded an ODS alternatives survey in 2016, which showed the following for each user sector:

- Refrigeration: the formerly popular HCFC-22 has been slowly replaced with the alternatives R-404A, R-507A, and R-744 for industrial applications; with HFC-134a, R-404A, R-507A, HC-290, and R-744 (CO₂) for commercial refrigeration; with HFC-134a and HC-600a for domestic refrigeration; and with HFC-134a, R-404A, and R-507A for mobile refrigeration.
- The most frequently used synthetic alternatives in refrigeration are HFC-134a, R-404A, and R-507A and the natural alternatives are HC-600a, HC-290, and R-744 (CO₂), which is considered the best option for use at low temperatures, mainly in indirect and cascade refrigeration systems. This is the case for the implementation of refrigeration systems based on transcritical CO₂, which have been installed in two supermarkets in the country, with co-financing from the CCAC and the MLF, respectively. It should be mentioned that the usage of ammonia (R-717, NH₃) predominates in the agro-industrial sector.
- Air conditioning: The only alternative substance used in mobile air conditioning is HFC-134a. In the air conditioning sector, the principal alternatives to HCFC-22 are R-410A for domestic and commercial air conditioning, and R-407C in the industrial sector, with R-410A predominating.
- Maintenance sector: it is reported that R-507A was mainly used in industrial refrigeration, R-404A for commercial and industrial refrigeration, and HFC-134a for domestic and commercial refrigeration.
- Foam sector: HCFC-141b is the most heavily used substance in the foam sector, but large and medium-sized companies are replacing it with cyclopentane for manufacturing rigid panels of polyurethane foam. Small and Medium-sized enterprises (SMEs) have begun to use HFC-365mfc and HFC-365mfc/HFC-227ea blend as replacement substances for discontinuous production of polyurethane panels and spray application. However, in the framework of HPMP Phase II, an emerging group of blowing agents (HFO-1336mzz and HFO-1233zd) is being promoted as alternatives for discontinuous production of polyurethane panels and spray applications by SMEs.
- Fire extinguishing sector: uses HFC-227ea, followed by HFC-125 and HFC-23, the latter being used only infrequently and with a very small market share. Novec1230® (1,1,1,2,2,4,5,5,5-nonafluoro-4-trifluoromethyl-3-pentanone) is used to a lesser extent. Significant usage of N₂ is reported for refilling extinguishers, with extremely low usage of CO₂ for this purpose.
- Aerosol sector: the principal substances used are LPG (Liquefied Petroleum Gas; propane-butane mix), HFC-134a, and DME, with LPG accounting for more usage than any other substance, suggesting that it will continue to displace other options. The alternatives identified in the solvents sector are PFC-218, HFC-152a, and perfluorocarbons PFC-552 and PFC-662.
- Forecasts: Linear growth projections forecast a significant increase in imports of HFC-134a, R-507A, and R-410A for refrigeration, and to a lesser extent R-407C. Nonetheless, the projection for R-404A imports shows a severe decline, as this substance is being replaced with R-507A in commercial and industrial refrigeration applications, such as supermarkets, cold stores, distribution centres, etc.

Forecasts for the foam sector predict an increase in HFC-365mfc and cyclopentane, and to a

¹⁷ Economic Commission for Latin America and the Caribbean (ECLAC) / Organisation for Economic Co-operation and Development (OECD), *Environmental performance reviews: Chile 2016*, Santiago, 2016.

lesser extent the blend HFC-227ea/HFC-365mfc. Other alternative substances are expected to see limited growth, not rising far above current import levels.



Source: “Report - Survey on ODS alternatives (HFCs and others)”, Ozone Unit, Ministry of the Environment of Chile – UNIDO, Jan. 2017

Graphic 1: Forecast of ODSs alternatives, 2016-2030 (metric tonnes)

4. Institutional arrangements for implementation of enabling activities.

Implementation of the enabling activities will be accomplished using the existing national infrastructure and institutional setting already established for ODS phase-out activities. Institutional arrangement in Chile is such that management of ozone depleting substances projects are executed by the National Ozone Unit, under the Division of Climate Change of the Ministry of Environment. The implementing agencies, UNDP, UN Environment and UNIDO staff members, regional and national experts/consultants will provide support to the NOU in this project implementation.

Other relevant stakeholders will be involved in the discussion on the Kigali amendment ratification process through the already established Inter-Agency Commission (IS project Steering Committee), which has representatives from the Ministry of Environment, Agriculture, Foreign Affairs, Energy, Economy, and Finance and other governmental bodies. Several targeted meetings will be organized with the RAC association, Universities and vocational institutes, which are the institutions that have traditionally provided training in the refrigeration sector, and with the National Customs Service for assisting in development of licensing and quota system for HFCs.

5. Components proposed for enabling activities

Proposed Component 1:	Facilitate early ratification of the Kigali Amendment
Implementing agency	UNDP
Objective:	Achieve a broader understanding of the Kigali amendment provisions and to prepare the stakeholders for its implementation.
Target Group:	High-level decision makers, relevant governmental institutions, private companies and servicing technicians in the sectors that are using HFC
Description of activities	<ul style="list-style-type: none"> • Stakeholder’s consultations to facilitate the ratification process at the national level. • Awareness raising of relevant stakeholders on HFC phase-down and energy efficiency improvement options.
Outputs	<ul style="list-style-type: none"> • Stakeholders aware about the ratification of the Kigali amendment and its implications, both at legal and technical level. • Production of information fact sheets on the Kigali amendment to facilitate consultations and speed up the ratification.
Outcome	The ultimate target of this component is ratification of the Kigali Amendment. However, the ratification process itself is done beyond the mandate of the NOU. With these activities, competent authorities and main private stakeholders will be well prepared to support the Kigali amendment ratification process and its implementation.

Proposed Component 2:	Capacity-building & training for alternatives
Implementing agency	UNIDO
Objectives:	<ul style="list-style-type: none"> • Provide basic training to the NOU, the governmental stakeholders, servicing sector and end-users for addressing the emerging responsibilities of the Kigali Amendment • Identify the needs of modification of existing regulation or creation of new regulation that would facilitate the HFC phase-down. • Develop a training for addressing the energy efficiency challenge in installation of new or updating existing R&AC systems.
Target Group:	NOU, governmental institutions related to HFC control (Environment - climate change, legal affairs-, Energy, Customs, and others), training centres in R&AC, Chilean Chamber of R&AC, RAC-installers and maintenance services, and others as appropriate.

Description of activities	<ul style="list-style-type: none"> • Undertake a training for the NOU and its direct counterparts (stakeholders) from the public and private sector, on HFC regulation and control, including responsibilities of the application of the Kigali amendment, data reporting in CO₂ eq tonnes, energy efficiency, safety standards, etc. • Training on design, installation and maintenance of energy efficient R&AC systems, related to low and zero-GWP replacement technologies to HFCs, i.e. natural refrigerants and not-in-kind technologies. The participants would belong to service sector (installation and maintenance), project developers, technical departments of big users, and teachers from educational centres, between others.
Outputs	<ul style="list-style-type: none"> • Report of challenges and requirements for introducing low and zero-GWP alternatives on the R&AC sectors, considering environmental and energy efficiency advantages in the selection of alternative technologies. • NOU staff upgrade their knowledge and skills to meet the new responsibilities, particularly to monitor the consumption of HFCs as well as to envisage a streamlined approach to HFC phase-down complementary with the country energy efficiency policy.
Outcome	Main country stakeholders are able to accept the new expected roles due to their understanding of the shifting context, and acquiring confidence by using the opportunities associated to the Kigali Amendment implementation. The capacities of beneficiaries for critical analysis, debate and decision taking on alternative technology are thereby improved.

Proposed Component 3:	Article 4B licensing & Reporting
Implementing agency	UN Environment (UNEP)
Objective:	Develop a required regulatory package to set up import/export licensing system for HFC and HFCs alternatives.
Target Group:	NOU, National Customs Service, and ODSs alternative importers.
Description of activities	<ul style="list-style-type: none"> • Consultancy on a comprehensive review of local licensing/quota system of ODS's resulting in a proposal for how to include HFCs, HFCs blends, and HFOs into the licensing system. Including the support to the NOU to review and improve the current approach and methodologies related to the collection, verification and country reporting of HFCs and alternatives • International expert assisting customs authorities in defining the national licensing and quota system model to be adopted for individual HFCs and HFC blends, in order to ensure proper monitoring and recording of imports/exports of HFCs and alternatives substances, achieving HFC phase-down goals. • Training of Customs officers on import and export control of HFC and HFC blends. • Compilation of regulations related to HFC, including those related to energy efficiency and climate change.

Outputs	<ul style="list-style-type: none"> • Current licensing/quota system updated to meet all requirements of the Article 4B as well as to facilitate the country compliance with the HFCs phase-down schedule. • Modification and update of the customs import/export licensing system for HFC and HFC blends and a proposal of the quota system to be implemented. • Recommendations for further planning of policy measures, technical assistance activities and assignation of roles officially defined for reaching a cost/effective HFCs phase-down.
Outcome	The NOU of the Ministry of Environment is empowered to an effective implementation of HFCs controls once the Kigali Amendment is ratified

6. Budget

Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 87.5 ODP t., the Government of Chile requests to the 80th Meeting of the Executive Committee the amount of USD\$ 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

Table 1. Budget per component

Activities	Proposed cost in (US\$) without PSC
Component 1: Facilitate early ratification of the Kigali Amendment	33,000
Component 2: Capacity-building & training for alternatives	86,000
Component 3: Article 4B licensing & Reporting	31,000
Total in (US\$) without PSC	150,000

Table 2. Budget per item

Activities	Item	US\$
Component 1: Facilitate early ratification of the Kigali Amendment	Conduct at least six stakeholder consultation meetings to facilitate the ratification process at the national level.	27,000
	Production of information sheets on the Kigali amendment to facilitate consultations and speed up the ratification	6,000
<i>Subtotal 1</i>		33,000
Component 2: Capacity-building & training for alternatives	Undertaking a training for the NOU and its direct counterparts (from public and private sector, on HFC regulation and control, including participants from the Ministry of Environment (climate change, legal affairs), Ministry of Energy, Customs Service, and representative of private associations related to HFC in R&AC sector, between others.	
	- 8 participants x training, USD 5,000 each (air tickets and DSA)	40,000
	- 8 training courses, USD 2,500 x participant	20,000

Activities	Item	US\$
	Hiring an international expert to train on design, installation and maintenance of R&AC energy efficient systems, related to low or zero GWP replacement technologies to HFCs. At least 2 training courses. - 1 expert, USD 6,500 x 4 months, including travel fees.	26,000
Subtotal 2		86,000
Component 3: Article 4B licensing & Reporting	Hiring a local consultant to support the government with: <ul style="list-style-type: none"> Comprehensive review of local licensing/quota system of ODS's resulting in a proposal for how to include HFCs, HFCs blends, and HFOs into the licensing system. Support the NOU to review and improve the current approach and methodologies related to the collection, verification and country reporting of HFCs and alternatives. 	7,100
	Hiring an international expert assisting customs authorities in defining the national licensing and quota system model to be adopted for individual HFCs and HFC blends, to ensure proper monitoring and recording of imports/exports of HFCs and alternatives substances, achieving HFC phase-down goals.	12,000
	Training of Customs officers on import and export control of HFC and HFC blends.	8,900
	Contracting a national lawyer (part time, 1month) to support the NOU on compilation of regulations related to HFC, including those related to energy efficiency and climate change.	3,000
Subtotal 3		31,000
Total (US\$)		150,000

7. Enabling activities milestones and time plan

Activities	2018												2019					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Component 1: Facilitate early ratification of the Kigali Amendment																		
Signature of the formal documents between implementing agencies and the Government.	x	x	x															
Elaboration of awareness raising materials related to the Kigali Amend			x	x														

Activities	2018												2019					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Stakeholder's consultations to facilitate the ratification process of the Kigali Amendment.				x	x	x	x	x	x	x	x	x	x	x	x			
Component 2: Capacity-building & training for alternatives																		
Hiring experts and consultants		x	x															
Training of the NOU and its direct counterparts from public and private sector, on HFC regulation and control.				x	x	x	x	x	x									
International expert to train on design, installation and maintenance of R&AC energy efficient systems (at least 2 training								x	x	x	x							
Component 3: Article 4B licensing & Reporting																		
Hiring experts and consultants				x	x													
Comprehensive review of local licensing/quota system of ODS alternatives and based-products and equipment.						x	x	x	x									
International expert assisting customs authorities in defining the national licensing and quota system model to be adopted for individual HFCs and HFC blends									x	x	x	x	x	x	x			
Training of Customs officers on import and export control of HFC and HFC blends							x	x										
National lawyer to support the NOU on compilation of regulations related to HFC						x												

8. Statement by the Government and Implementing Agency

The Government of Chile and UNDP as leader agency, UN Environment and UNIDO as cooperating agencies, confirm that the proposed enabling activities will not delay the implementation of HCFC phase-out activities in the country.

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY: China

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: UN Environment

NATIONAL COORDINATION AGENCY: Foreign Economic Cooperation Office of MEP, China

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: no

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION: 18 months
PROJECT COST: USD 250,000
SUPPORT COST: USD 25,900
TOTAL COST FOR THE MLF: USD 275,900

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support the government of China to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in relation to the hydrofluorocarbon phase-down under the Amendment:
 - (1) Capacity-building and training for the handling of hydrofluorocarbon alternatives in the servicing, manufacturing and production sectors;
 - (2) Institutional strengthening;
 - (3) Article 4B licensing;
 - (4) Reporting;
 - (5) Demonstration projects; and
 - (6) Development of national strategies;
2. In its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali Amendment.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of China signed the Vienna Convention for the Protection of the Ozone Layer in June 1989, the Montreal Protocol on Substances that Deplete the Ozone Layer and its London Amendment in June 1991. Since then, China has been committed to phase-out ODS in accordance with its designation as an Article 5 (A5) country. Subsequently, the Chinese Government ratified the Copenhagen Amendment in April 2003 and the Montreal Amendment and the Beijing Amendment in May 2010. The Chinese Government approved “the Country Programme on the Gradual Phase-out of Ozone Depleting Substances” in January 1993 and established phase-out strategy for major sectors of ODS production and consumption in 1995. In November 1999, the Chinese Government approved the revised version of the Country Programme.
5. The Chinese Government attached great importance to ozone layer protection. Since China joined the Montreal Protocol in 1991, the State Council approved establishment of the National Leading Group for the Protection of the Ozone Layer with 18 ministries and commissions as members. The Ministry of Environmental Protection (MEP) served as the chief of the National Leading Group. The National Leading Group is an interagency organization responsible for implementation of the Vienna Convention and the Montreal Protocol, carries out the Country Programme, reviews implementation programmes and makes decisions. The Coordination Group for the Protection of the Ozone Layer and the Multilateral Fund Project Management Office were established under the Leading Group.
6. With the support of Multilateral Fund (MLF) and international institutions, China has implemented 31 sector plans and more than 400 individual projects. China has phased out production and consumption of CFCs, Halons, CTC, TCA, Methyl Bromide and HCFCs with a total amount of 270,000 metric tons, accounting for about half of the total phase-out amount of A5 countries.
7. Chinese Government attached great importance to the establishment of relevant policies. In 2010, the State Council approved and enforced Regulation on Ozone Depleting Substances management to

standardize and specify objective, obligation and responsibilities for ODS Phase-out. Over the past twenty years, Chinese Government has issued over 100 policies and regulations, and strengthened implementation and enforcement of laws and regulations to ensure that ODS production and consumption could be phased out gradually at the national level. MEP implements the production and consumption quota system with technical support from the National Ozone Unit (Foreign Economic Cooperation Office). National ODS Import and Export Management Office (I&E office) manages ODS import and export in coordination with three Ministries, Ministry of Environmental Protection, Ministry of Commerce and General Administration of Customs.

8. The government of China has achieved the target of 10% reduction of HCFCs in 2015 through the successful implementation of the stage I HCFCs Phase-out Management Plan (HPMP) and is implementing the Stage II of HPMP for the 35% reduction of HCFCs by 2020.
9. Although the government of China has a well-established legal and institutional framework to implement the Montreal Protocol and its Amendments ratified so far, the Kigali Amendment brings immediate and additional challenges. It is crucial for China to implement enabling activities for early ratification of the Kigali Amendment for establishing a sound foundation to undertake future work towards its implementation.

C. Objective

10. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented

11. Component 1: Enable the Legal Framework for the ratification and implementation
A legal consultant will be employed to provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers. Legal consultancy will assess and identify the legislation and policies needed to fulfill the initial obligation of the Kigali Amendment, and provide suggestions on the establishment of the legislation and policy framework for the HFCs management.
12. Component 2: Facilitate the coordination mechanism
Project will support the identification of new partners for the Kigali Amendment, coordination activities between relevant government institutions and stakeholders during the ratification process, and review/upgrading of the established coordination mechanism at the national level to provide guidance on the policies and action plans for ratifying/initial implementing the Kigali Amendment. A coordination meeting including all Implementing Agencies of Multilateral Fund working in China is to be organized.
13. Component 3: Establish the licensing systems on HFCs import/export

Project will support the National ODS Import and Export Management Office to review the current ODS import/export licensing/quota system for covering HFCs import/export control, and to coordinate with the stakeholders and national institutions to put the licensing system on HFC import/export in place once China ratifies the Kigali Amendment.

14. Component 4: Establish HFCs data reporting system

Project will assess the current ODS production and consumption data reporting system and extend it to the HFCs in line with the data reporting requirement of A7 and country program, and support the establishment of HFC-23 by-product emission reporting and monitoring system by 1 Jan, 2020.

15. Component 5: Undertake an initial research on national strategy on HFCs phase-down

Project will support an initial research on national strategy for the ratification and implementation of the Kigali Amendment, including policy, institution and management framework, the information on HFCs production and consumption, sector profile and analysis, estimated baseline, and the prediction of the growth of HFCs, mapping the alternative technology, linkage with HCFC phase-out, identifying potential priority areas for HFCs phasing down to fulfil the initial obligation.

16. Component 6: Awareness raising and training

The outreach/awareness activities will be conducted to targeted groups and stakeholders involved in the ratification processes of the Kigali Amendment. A training workshop to the key national stakeholders especially FECO colleagues for the new skills/knowledge will be organized for better implementation of the Kigali Amendment.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs and policy on the licensing system for HFCs import/export.
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) An initial research on national strategy on phasing down HFCs.
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered, and the capacity of key stakeholders for the implementation of the Kigali Amendment enhanced.
- (g) Ratification of the Kigali Amendment

F. Budget Description

17. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 18,865 ODP tonnes, the government of China requests to the 80th Meeting of the Executive Committee the amount of USD 250,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Implementing Agency	Budget (US \$)
Component 1	Enable the Legal Framework	UNDP	30,000
Component 2	Facilitating the coordination	UNDP	35,000
Component 3	Establish the licensing systems	UN Environment	40,000
Component 4	Establish HFCs data reporting system	UNDP	20,000
Component 5	Undertake an initial research on national strategy on HFCs phase-down	UNDP	80,000

Component 6	Awareness raising and training	UN Environment	45,000
Subtotal		UNDP	165,000
Subtotal		UN Environment	85,000
Total project cost			250,000
Supporting cost		UNDP	14,850
Supporting cost		UN Environment	11,050
Total cost			275,900

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Project Start-up</i>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<i>Project Implementation</i>																			
5	Information Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Framework																		
9	Licensing and Report assessment																		
10	The initial research on national strategy on HFCs phase-down																		
11	Awareness activities and training																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY: Colombia

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT/OZONE TECHNICAL UNIT (UNIDAD TÉCNICA OZONO – UTO)

PROJECT INCLUDED IN CURRENT BUSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION:	18 months
PROJECT COST:	USD 250,000
SUPPORT COST: (9%)	USD 22,500
TOTAL COST FOR THE MLF:	USD 272,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Colombia to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of Colombia acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Colombia has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The Ozone Technical Unit implements the quota system in coordination with the National Tax and Customs Direction - DIAN and The National Authority for Environmental Licensing-ANLA.
6. The Government of Colombia is implementing the Stage II of its HCFCs Phase-out Management Plan (HPMP) and has achieved the following results on:
 - Reduction of 36% for the HCFCs consumption in 2017.
 - Continuing the closely work with the customs authority to achieve and maintain compliance with Montreal Protocol targets through monitoring trade.
 - Strengthening of the legal framework to control and monitor HCFCs consumption through import/export licensing and quota systems and new regulations;
 - Developing synergies with Climate Change initiatives which resulted in the formulation and submission of the Nationally Appropriate Mitigation Action (NAMA) for domestic refrigeration sector in Colombia in order to reduce emissions of Greenhouse Gases-GHG effect and contribute to sustainable development.
 - Developing other projects as the Districts Cooling Project or demonstration projects, are ongoing to promote alternatives to replace ODS consumptions in several sectors.
 - 1850 certified technicians in standard NCL 280501022, 38 workshops on good practices and 5 seminars for SENA instructors were carried within a period comprehended between September of 2011 and July of 2015.
 - Establishment of 18 collection centers and five reclaim centers of refrigerants gases.

7. Although the Government of Colombia has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.
8. According to the inventory of substances carried out in 2016, there is evidence of growth of HFC as substitute substances offered by the market mainly for the refrigeration and air conditioning sector, in addition, estimates showed that the consumption of HFC in mixtures is higher than consumption of HFC as pure substance.

Currently, for the import of HFC to the country, it is necessary to process environmental license prior to the approval for import.

C. Objective

9. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the Ozone Technical Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented:

(a) Enable the Legal Framework for the ratification: the project will provide technical support to the Ozone Technical Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the Ozone Technical Unit and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to HFCs and updating with the new series of pure and blended HFCs (at national level) and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (at national level);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.
- (g) Customs authorities to control HFC strengthened.

F. Budget Description

10. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 225.57 ODP t, the Government of Colombia requests to the 80th Meeting of the Executive Committee the amount of USD \$ 250,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	National Consultant	100,000
2.	Legal Advisor	35,000
3.	Strengthening of the customs authorities to control HFC	15,000
4.	Implementation of a dynamic quota system.	30,000
5.	Meetings and Missions	60,000
6.	Sundry	10,000
	Total	250,000

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Project Start-up																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
Project Implementation																			
5	Support to the Ratification Process																		
6	Legal and Policy Fram. Review / General proposal of decree for HFC.																		
7	Strengthening of the customs authorities to control HFC																		

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
8	Implementation of a dynamic quota system.																		
9	Review the national Customs Codes																		
10	Review the licensing and data reporting systems on HFC																		
11	Workshops and meetings																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY:

Costa Rica

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: Ministry of Environment and Energy

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION: 18 months
PROJECT COST: USD 150,000
SUPPORT COST: (9%) USD 13,500
TOTAL COST FOR THE MLF: USD 163,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Costa Rica to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down the HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, at its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regards to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of Costa Rica acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment.
5. In the Legislative Assembly of Costa Rica, there is a draft law, under legislative file number 20380, for ratification of the Kigali amendment. When the amendment is ratified by the competent national authority, it will initiate the disclosure process between HFC importers and consumers. A parallel process will establish the national regulations necessary to implement an import quota system for HFCs, as was the case with HCFCs.
6. The Costa Rica has successfully phased-out CFCs in RAC and PU Foam applications and has established an enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
7. The Costa Rica is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has achieved the following results:

Activities	Outcomes
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<p>Training for technicians and professionals for the maintenance of RAC equipment.</p>	<ul style="list-style-type: none"> • 1223 Technicians in refrigeration and air conditioning equipment with improved capacities, holders of a license that recognized them the approval of the training on Good Practices of Service in Refrigeration and Air Conditioning, given by the National Institute of Learning (INA). • In parallel processes around the country, there have been different workshops focused on the proper management of refrigerants in the Refrigeration and Air Conditioning sector, to 536 people between technicians and professionals.
<p>Establishment of mechanisms to facilitate the selection of efficient equipment and a system of incentives that promote the commercialization of eco-efficient equipment.</p>	<ul style="list-style-type: none"> • Awareness of the managers of the chain of importing appliance stores (280 people between sellers and users of RAC equipment have been trained and sensitized to acquire eco-efficient equipment.
<p>Improve import and export control systems. Improve access to users.</p>	<ul style="list-style-type: none"> • Appropriate application of tariff codes for the import of ODS, through the creation of tariff items for HCFC and HFC mixtures. • Reducing the risk of illicit traffic in ODS • Control of HCFC import quotas
<p>Strengthening HCFC recovery and utilization capacity and establishment of a mechanism for the storage of unwanted ODS including HCFCs.</p>	<ul style="list-style-type: none"> • Equipment for recovery of refrigerant gases to: Three vocational schools (3 recuperators, 6 recovery tanks of 30 pounds and 3 1000 lbs tanks) Two special waste managers (2 recuperators, 4 tanks of 30 lbs and 2 tanks of 1000 lbs) • Promotion, dissemination and awareness of service providers to avoid emissions of HCFC gases with the adoption of good practices in service and maintenance of RAC equipment. (Recovery, recycling and reuse of gases)
<p>Management and supervision of the program.</p>	<ul style="list-style-type: none"> • Administrative management of the HCFC phase-out plan in Costa Rica as a focal point for compliance with defined actions to reach 35% reduction in HCFC consumption by 2020.

Although Costa Rica has a well established Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and will require the establishment of a sound foundation to undertake future work towards its the implementation.

C. Objective

10. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down under the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented.

(a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: the mechanism which the NOU and other governmental institutions and stakeholders (private and public sectors) rely on to consult, oversee and implement the Montreal Protocol activities in the country will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process. If required, further steps to establish or expand the proper mechanism for the Kigali Amendment will be taken.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs, and to develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (also dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

F. Budget Description

11. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 14,1 ODP t., the Costa Rica requests to the 80th Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	15,000
2.	National Consultant	45,000
3.	Legal Advisor	10,000
4.	Information collection, consolidation and analysis	30,000
5.	Consultation meetings	30,000
6.	Missions	10,000
7.	Sundry	10,000
	Total	150,000

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Project Start-up																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
Project Implementation																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY: FIJI

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: Ministry of Local Government, Housing, and Environment,
Government of Fiji

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION: 18 months

PROJECT COST: USD 150,000

SUPPORT COST: (9%) USD 13,500

TOTAL COST FOR THE MLF: USD 163,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Fiji to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of Fiji acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. Fiji has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
6. Fiji is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) (with UNDP as lead implementing agency and UN Environment as cooperating agency) and has the target to reduce HCFC consumption by 35 per cent of the baseline by 2020 resulting in the phase out 2.95 ODP tonnes. The main activities to be implemented during stage I include regulatory actions and assistance to refrigeration servicing sectors and implementation and monitoring.
7. Although the Fiji has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.

C. Objective

8. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented:

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

(f) Conduct technical assessments on the industry to gage projections on HFC consumption and introduction of new alternatives: assess the current trend on HFC consumption and the viability of alternatives to the industry for better decision making on new policies and roadmaps in the implementation of Kigali Amendment

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.
- (g) Comprehensive data on HFC and alternatives.

F. Project's Implementation Modality

- The project will be implemented under the Direct Implementation Modality (DIM), where UNDP acts as implementing agency withholding responsibilities in terms of the project's operational, budgetary and financial monitoring. UNDP will support the National Ozone Unit in the recruitment of international and national consultants, as well as to undertake the hiring of services and missions required to implement the project.
- The Government of Fiji, through the National Ozone Unit housed by the Ministry of Local Government, Housing and Environment will act as executing partner, being responsible to coordinate and undertake the field activities of the project. The project is to be implemented through a nationally driven process composed by many cycles of stakeholder's consultations.

G. Budget Description

Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 8.44* ODP t., the Fiji requests to the 80th Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	20,000
2.	National Consultant	25,000
3.	Legal Advisor	15,000
4.	Information collection, consolidation and analysis	55,000
5.	Consultation meetings	5,000
6.	Missions	20,000
7.	Sundry	10,000
	Total	150,000

* once the new baseline is approved by the 29th MOP, we will adjust the project budget accordingly to the new baseline

H. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Project Start-up</i>																			
1	ExCom Project Approval	█																	
2	Receipt of Funds		█																
3	Project Document Signature		█																
4	Consultants Recruitment		█	█	█														
<i>Project Implementation</i>																			
5	Data Collection				█	█	█	█											
6	Consultation Meetings				█	█	█	█	█										
7	Support to the Ratification Process					█	█	█	█	█	█	█	█	█	█	█	█	█	█
8	Legal and Policy Fram. review					█	█	█	█	█	█	█	█	█	█	█	█	█	█
9	Licensing and Report assessment					█	█	█	█	█	█	█	█	█	█	█	█	█	█
10	Awareness Programme					█	█	█	█	█	█	█	█	█	█	█	█	█	█

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY: JAMAICA

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: The Planning Institute of Jamaica

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION:	18 months
PROJECT COST:	USD 150,000
SUPPORT COST: (9 %)	USD 13,500
TOTAL COST FOR THE MLF:	USD 163,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support the Government of Jamaica to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of Jamaica acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Jamaica has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
6. The Government of Jamaica is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has achieved the following results: a comprehensive licensing system to monitor and control trade in ODS, a quota system for HCFCs, guidelines for the prohibition of importation of equipment containing HCFCs, guidelines on the procedures for export of HCFCs, replacement of 33 mT of HCFC 141b with methyl formate in the PU foam sector, completion of the training manual for technicians for good practices in refrigeration and the implementation of many train-the-trainers courses, among others.
7. Although the Government of Jamaica has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.

C. Objective

8. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented:

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.
- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

F. Budget Description

9. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 16.30 ODP t., the Government of Jamaica requests to the 80th Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	30,000.00
2.	National Consultants	45,000.00
3.	Legal Advisor	15,000.00
4.	Information collection, consolidation and analysis	25,000.00
5.	Consultation meetings	15,000.00
6.	Missions	15,000.00

7.	Sundry	5,000.00
	Total	150,000.00

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Project Start-up</i>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<i>Project Implementation</i>																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE EARLY RATIFICATION OF THE KIGALI AMENDMENT

COUNTRY: LEBANON

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: Ministry of Environment

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: Yes (2018-2020)

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION:	18 months
PROJECT COST:	USD 150,000.00
SUPPORT COST: (9%)	USD 13,500.00
TOTAL COST FOR THE MLF:	USD 163,500.00

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support the Government of Lebanon to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. Lebanon is a Mediterranean country with land area of about 10,452 km² and a population of about 4.4 million. About 80% of the population is urban. The key economic sectors are services (about 60% of the Gross Domestic Product), Industry (about 26% of the Gross Domestic Product) and agriculture (about 14% of the Gross Domestic Product).
5. Lebanon ratified, in 1993, the Vienna Convention and the Montreal protocol with all its amendments to control the imports and consumption of substances that deplete the ozone layer.
6. Lebanon is, as well, a partner of the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants (CCAC), and ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto protocol in 1997.
7. Lebanon's Country Programme reflected the national strategy and action plan for controlling the use of ozone depleting substances, and was prepared with the assistance of the National Working Committee, established in 1994, at the Ministry of Environment, and approved at the 17th Meeting of the Executive Committee of the Multilateral Fund, in 1995. The Country Programme prioritized Ozone Depleting Substance (ODS) phase-out activities in the main ODS consuming sectors, through technology transfer investments, technical assistance, capacity building, and training.
8. On the other hand, Hydrochlorofluorocarbons (HCFCs) are classified as controlled substances under Annex-C Group-I of the Montreal Protocol and are subject to the adjusted control schedule for Article-5 countries; to freeze the consumption at baseline levels from 2013 and reduction of 10% from baseline levels from 2015.
9. In Lebanon, HCFCs are used in various sectors, such as air conditioning, refrigeration, and foam manufacturing. The predominant HCFC used is the HCFC-22, mainly in the refrigeration and air conditioning sectors. HCFCs consumption in Lebanon increased from 413 metric tons in 2008 to 924 metric tons in 2014, indicating an average annual growth rate

of about 15%. The main reason for this growth is the sustained economic development and resulting increase in demand for consumer, commercial and industrial products that use HCFCs.

Table 1 - Dates of ratification by Lebanon of the Montreal Protocol and its amendments were:

AGREEMENT	RATIFICATION	ENTRY INTO FORCE
Vienna Convention	March 30, 1993	June 28, 1993
Montreal Protocol	March 30, 1993	June 28, 1993
London Amendment	March 31, 1993	June 29, 1993
Copenhagen Amendment	July 31, 2000	July 31, 2000
Montreal Amendment	July 31, 2000	July 31, 2000
Beijing Amendment	November 21, 2008	November 21, 2008

10. All chlorofluorocarbons (CFC) phase-out actions were addressed through the National Phase-out Management Plan for Annex-A, Group-I Substances (CFCs) in Lebanon (NPMP), which were completely phased-out in January 2010. The country has also completely phased-out consumption of Methyl Bromide by the year 2015.
11. HCFCs, therefore, have restrictions and will eventually be phased-out as per current schedule. Initially, for developing countries, the scheduled phase-out date for HCFCs is 01 January 2035 with an interim control measure of freezing HCFC production and consumption in 2013.
12. Recognizing the environmental benefits of reducing HCFC production and consumption earlier than the previous control schedule, the 20th Meeting of the Parties (MOP) to the Montreal Protocol, held in September 2007, through its Decision XIX/6 has accelerated the phase-out schedule for HCFCs by 10 years. For Article 5 countries, the first control was the freeze on production and consumption of HCFCs from 01 January 2013, at the Baseline Level (average of 2009 and 2010 consumption levels). The second control step was the reduction of 10% from the Baseline Levels on January 1, 2015. Subsequent control steps are 35% reduction by 2020, 67.5% by 2025, 97.5% by 2030 and complete phase out from January 1st 2040. The decision confirmed stable and sufficient funding for Article-5 countries to meet these new obligations.
13. In relation to the overall strategy for achieving the accelerated HCFC phase-out targets, Lebanon prepared the HCFC Phase-out Management Plan (HPMP Stage - I) during the period 2009-2011, and it was approved in July 2011 at the 64th Meeting of the Executive Committee. This Project defined an overall strategy and an action plan that would address the initial targets for compliance with HCFC phase-out i.e., 2013 and 2015 targets. HPMP Stage-I had a series of interventions including the project level support to two (2) HCFC consuming enterprises, technical assistance for adopting HCFC free technologies, capacity building and information outreach measures and project management, monitoring and coordination. As result of this, Lebanon committed to achieving reduction of HCFC consumption from its freeze level of 76.5 ODP tons to 60.44 ODP tons by the year 2017 and the project is under implementation.

14. The following step is the HPMP Stage-II for compliance with the post-2015 targets, when Lebanon submitted a request for funding the preparation to the 72nd meeting of the Executive Committee, which was approved in July 2014 as the preparation of the HCFC phase-out management plan (HPMP Stage-II) for Lebanon. These funds were used to conduct the field surveys on HCFC consumption levels and trends including update of data collected during HPMP Stage-I and developing a strategy for achieving future targets for HCFC phase-out as indicated above. The result of this survey was used to establish the HCFC consumption profiles and projected growth rates in HCFC consumption in the remaining sectors in Lebanon. The survey was carried out in 2015 and focused on data collection from the remaining enterprises in the Foam and refrigeration and air-conditioning (RAC) sectors as well as the servicing sector, and provided an analysis mainly from upstream suppliers of chemicals and equipment, as well as sampling of enterprise-level HCFC use patterns.
15. The Government of Lebanon designated UNDP to be the implementing agency for the HCFC phase-out management plan (HPMP, Stage-II) in Lebanon. In June 2016, the grant was approved by Decree No. 3630 of the Council of Ministers. The HPMP Stage-II project was initiated in August 2016 and several activities are being implemented since September 2016. During the implementation period of the stage-II (2016-2025) the focal areas will be the remaining PU foam, RAC industries and RAC servicing sectors. With this project support, the government is ensuring a proper and timely phase-out by implementing several applications, so that ODSs consumption is phased-out in a cost-effective way and the industry competitiveness remains unaffected due to the adoption of the new technologies (HFCs, HC, HFO, etc.), and adopting a strategy that would result in the introduction of low GWP ODS alternatives in the local market.
16. Although the Government of Lebanon has a well-established legal and institutional framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its implementation.

C. Objective

17. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the Government of Lebanon to fulfil its initial obligations to phase-down HFCs in line with the Kigali Amendment and the ExCom Decision 79/46.

D. Activities to be Implemented:

- a. Facilitate and support the ratification of the Kigali Amendment: the project will provide technical support to the Government of Lebanon (Ministry of Environment) to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment. Ultimately, this should speed up the process and assure that the correct information and legal support is delivered to the decision makers.

- b. Overall national policy framework for addressing HFCs phase-down plan: this policy and legislative assessment will be undertaken through a review of existing legislation related to the processes of identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that may prevent the future implementation of the Kigali Amendment;
- c. Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment. Improved interventions will be proposed to better integrate these stakeholders, undertake sound consultation processes and strengthen the ratification process.
- d. Provide technical assistance for safe adoption of alternatives: assess, from technical and economic points of view, the current available HFCs alternative technologies and the capacity needs in the local market to adapt and optimize low-GWP or zero-GWP alternatives to HFCs.
- e. Review the licensing and data reporting systems on HFCs: assess the current Licensing and Quota Systems applied to ODS to determine the actions that will be required to expand the control over the HFCs. Development of roadmaps to include new customs codes and tariff numbers for HFCs and their alternatives, in coordination with the Customs Authority, and develop for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- f. Conduct a study with the aim to: establish a baseline of existing HFCs banks in the RAC sector including relevant legislations, estimate GWP benefits of replacing HFCs with alternatives and develop measures and action plan for the future phasing down of HFCs in Lebanon
- g. Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

E. Outputs

- i. Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- ii. Coordination Mechanism/Committee established to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- iii. Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- iv. New data reporting system (for Article 7 and Country Programme) on HFCs established;
- v. Montreal Protocol's Controlled Substances Licensing System for Lebanon expanded to allow control of HFCs;

- vi. Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

F. Budget Description

18. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 73.50 ODP tons, the Government of Lebanon requests to the 80th Meeting of the Executive Committee the amount of USD 150,000.00 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	10,000.00
2.	National Consultants	35,000.00
3.	Legal Advisor	15,000.00
4.	Information collection, consolidation and analysis	55,000.00
5.	Consultation meetings	5,000.00
6.	Missions	10,000.00
7.	Awareness	10,000.00
8.	Sundry	10,000.00
	Total	150,000.00

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Project Start-up																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
Project Implementation																			
5	Data Collection and Analysis of data																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE EARLY RATIFICATION OF THE KIGALI AMENDMENT

COUNTRY: PERU

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: Ministry of Production

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION: 18 months

PROJECT COST: USD 150,000

SUPPORT COST: (9 %) USD 13,500

TOTAL COST FOR THE MLF: USD 163,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Peru to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of Peru acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Peru has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
6. The Government of Peru is implementing the Stage 1 of its HCFCs Phase-out Management Plan (HPMP) and has achieved the results such as the establishment of a quota system for HCFCs, the strengthening of the legal framework just to highlight some results and strengthening and training on alternatives.
7. Although the Government of Peru has a well established Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.

C. Objective

8. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented:

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.
- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

F. Budget Description

9. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 26.88 ODP t., the Government of Peru requests to the 80th Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	30,000.00
2.	National Consultants	45,000.00
3.	Legal Advisor	15,000.00
4.	Information collection, consolidation and analysis	25,000.00
5.	Consultation meetings	15,000.00
6.	Missions	15,000.00
7.	Sundry	5,000.00

Total	150,000.00
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G. Implementation Timeframe

	Activities	Months																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<i>Project Start-up</i>																		
1	ExCom Project Approval																	
2	Receipt of Funds																	
3	Project Document Signature																	
4	Consultants Recruitment																	
<i>Project Implementation</i>																		
5	Data Collection																	
6	Consultation Meetings																	
7	Support to the Ratification Process																	
8	Regulatory & Policy Fram. review																	
9	Licensing and Report assessment																	
10	Awareness Programme																	

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY:

Trinidad and Tobago

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: National Ozone Unit - Ministry of Planning and Development

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION:	18 months
PROJECT COST:	USD 150,000
SUPPORT COST: (9 %)	USD 13,500
TOTAL COST FOR THE MLF:	USD 163,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Trinidad and Tobago to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down the HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, at its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regards to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of the Republic of Trinidad and Tobago ratified the Vienna Convention and its Montreal Protocol on August 28, 1989 for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of the Republic of Trinidad and Tobago is currently in the process of ratifying the Kigali Amendment. The process is going through several steps, with the approval of the cabinet already being obtained and is now currently going through the final steps in the Ministry of Foreign Affairs and CARICOM. This should lead to the prompt ratification of the Kigali amendment. When the amendment is ratified by the competent national authority, it will initiate the disclosure process between HFC importers and consumers. A parallel process will establish the national regulations necessary to implement a licensing and import quota system for HFCs, as was the case with HCFCs.
6. The Trinidad and Tobago has successfully phased-out CFCs in all sectors and has established an enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office, Ministry of Trade and Industry and the Trinidad and Tobago Bureau of Standards (TTBS).
7. The Trinidad and Tobago is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has achieved good results so far. The implementation is in general on track, but have faced some minor delays.
8. Although Trinidad and Tobago has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and will require the establishment of a sound foundation to undertake future work towards its the implementation.

C. Objective

10. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down under the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be Implemented.

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.
- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: the mechanism which the NOU and other governmental institutions and stakeholders (private and public sectors) rely on to consult, oversee and implement the Montreal Protocol activities in the country will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process. If required, further steps to establish or expand the proper mechanism for the Kigali Amendment will be taken.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs, and to develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment. This includes training for the main institution dealing with control of import like TTBS, Customs, Ministry of Trade, Custom Brokers, etc.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (also dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

F. Budget Description

11. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 46,2 ODP t., the Trinidad and Tobago requests to the 80th Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	15,000
2.	National Consultant	35,000
3.	Legal Advisor	10,000
4.	Information collection, consolidation and analysis	30,000
5.	Consultation meetings	30,000
6.	Travel (National and International)	20,000
7.	Sundry	10,000
	Total	150,000

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Project Start-up																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
Project Implementation																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

COUNTRY: Uruguay

PROJECT TITLE: Implementing Enabling Activities for the ratification of the Kigali Amendment

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: UNIDO

NATIONAL COORDINATION AGENCY: Ministry of Housing, Land Management and Environment, Climate Change Division, National Ozone Unit

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

PROJECT DURATION:	18 months
PROJECT COST:	USD 150,000
SUPPORT COST: (9%)	USD 13,500
TOTAL COST FOR THE MLF:	USD 163,500

Project Summary

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Uruguay to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

A. Introduction

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

B. Country Background

4. The Government of Uruguay acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Uruguay has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform, Halons and the HCFCs. The National Ozone Unit implements the quota system in coordination with the National Customs Directorate.
6. Uruguay implemented the Stage I of its HCFCs Phase-out Management Plan (HPMP) and is implementing the Stage II, has achieved the following results:

Project	Activities/Achievements
<i>Adaptation and promulgation of policy instruments and capacity building</i>	
Adaptation and promulgation of policy instruments and capacity building	<p>Design and implementation of HCFC quota and license system.</p> <p>Quota allocations set yearly from 2013 to 2017.</p> <p>Establishment of the VUCE system to control import, export and transit of HCFCs and equipment containing them.</p> <p>Training and/or updating knowledge on HCFC control measures to customs officers, customs brokers and importers of HCFC.</p>
<i>Servicing Sector</i>	
Training in Good Practices in Refrigeration and Retrofits	<p>Practical and theoretical training on good refrigeration practices focused on the new trends available in the region.</p> <p>2 national training workshops on HCFC alternatives and good practices in refrigeration. 665 persons were trained between technicians, importers and students.</p>

Project	Activities/Achievements
	<p>Practical trainings in 4 cities around the country on new alternatives for its adoption in the main centers and subsector of HCFC consumption. 262 technicians trained.</p> <p>Field visits of 3 local technical experts to regional refrigeration and air conditional fairs and technical congresses in 2013, 2015 and 2017.</p> <p>LATU laboratory strengthened with RAC systems for trainings and assessments of new alternatives.</p>
Phase-out of HCFC-141b used in flushing activities	<p>Committee formed to support the assessment of, and training on alternatives to HCFC-141b used in Flushing.</p> <p>Purchase of 2 closed-cycle flushing equipment.</p> <p>A 1-day workshop on flushing procedures and alternatives was conducted by an international expert.</p>
<i>Awareness raising programme to support the HCFC phase out</i>	
Awareness campaign	<p>Redesign of awareness material, focused on HCFC control measures.</p> <p>Acquisition of Ozzy and Zoe Ozone dummies.</p> <p>Awareness activities related with HCFC control measures and HCFC alternatives adoption were conducted with universities and colleges to spread the country's commitments and alternatives to HCFC.</p> <p>Design and distribution of promotional material related to HCFC alternatives.</p>

7. Although the Uruguay has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.
8. Results of the ODS alternative survey conducted in 2016 showed that the consumption of HFC in the country has an upward trend, added to the limited availability of alternatives (such as HFO), this implicates additional challenges for the implementation of the Kigali amendment.

C. Objective

9. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

D. Activities to be implemented:

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Training on technical aspects on HFC alternatives: technical training on HFC alternatives for the NOU and key stakeholders to identify national challenges and technical capabilities gaps that could generate obstacles in the implementation of the Kigali amendment.
- (f) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New process for gathering consumption data (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) NOU and key stakeholders trained on HFC alternative technologies and challenges to implement the Kigali amendment.
- (g) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

F. Budget Description

10. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 23.4 ODP t., the Government of Uruguay requests to the 80th Meeting of the Executive Committee the amount of USD\$ 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	National Consultant	30,000
2.	Legal Advisor	40,000
3.	Information collection, consolidation and analysis	15,000

4.	Consultation meetings	15,000
5.	Training on technical aspects on HFC alternatives	30,000
6.	Missions	20,000
7.	Sundry	5,000
Total		150,000

11. Of the requested funds UNDP, as lead agency, will implement USD\$ 100,000 and UNIDO, as the cooperating agency, will implement USD\$ 50,000.

G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Project Start-up</i>																			
1	ExCom Project Approval	■																	
2	Receipt of Funds		■																
3	Project Document Signature		■																
4	Consultants Recruitment		■	■	■														
<i>Project Implementation</i>																			
5	Data Collection				■	■	■	■											
6	Consultation Meetings				■	■	■	■											
7	Support to the Ratification Process					■	■	■	■	■	■	■	■	■	■	■	■	■	■
8	Legal and Policy Fram. review					■	■	■	■	■	■	■	■	■	■	■	■	■	■
9	Licensing and data collection assessment					■	■	■	■	■	■	■	■	■	■	■	■	■	■
10	Technical training of NOU and key stakeholders					■	■	■	■	■	■	■	■	■	■	■	■	■	■
11	Awareness Programme					■	■	■	■	■	■	■	■	■	■	■	■	■	■

ANNEX 3

Funding requests for the preparation of HFC investments projects in:

**China (4 PRPs)
Dominican Republic
Egypt
Zimbabwe**

Country: People's Republic of China

Project Title: Preparation project for refrigerant leakage control research and production line optimization in a mobile air conditioning manufacturer

Lead Implementing Agency: UNDP

Sectors: Mobile Air Conditioning

Project Duration: 12 months

Preparation cost: 30,000

Implementing Agency Support Cost: US\$ 2,100

Total Cost of Project to MLF: US\$ 32,100

National Coordinating Agency: Foreign Economic Cooperation Office, Ministry of Environmental Protection (FECO/MEP)

Background and Introduction

The Kigali Amendment was adopted by the 28th Meeting of Parties to the Montreal Protocol on 15 October 2016 in Kigali, Rwanda. Under the amendment, countries committed to cut the production and consumption of HFCs by more than 80 percent over the next 30 years. The ambitious phase down schedule will avoid more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050—avoiding up to 0.5° Celsius warming by the end of the century.

HFC-134a (R134a) is a controlled substance listed in the Annex F under the Kigali Amendment. R134a with Global Warming Potential (GWP) of 1,430, is one of the major refrigerants that contributes to global warming and was used as an alternative to CFC-12 from early 2000's in A5 countries in mobile air conditioning. Due to lack of the strict leakage control policy and measures in most of the A5 countries currently, the consumption of R134a in the MAC servicing sector is much larger than the consumption for the new cars. The improvement of leakage control of MAC products will lead to the reduction of consumption of R134a in the life time of cars.

R1234yf, with zero ODP and very low GWP (4), was introduced as one of the alternatives of R134a in MAC. It has similar thermal properties as R134a and can be used as direct replacement of R134a after slight optimization of the system. As early as 2009, SAE's development project "CRP1234" has concluded that R1234yf can be used as the next generation refrigerant.

However, R1234yf is expensive and is slightly flammable; thus, in order to reduce the cost of using R1234yf as a replacement refrigerant and improve the safety, as well as to improve the efficiency of the refrigeration system, it is necessary to monitor and control refrigerant leakage of MAC system. With foreign air conditioning system, there exists strict regulations on the annual leakage rate of refrigerant. United States requires that the leakage rate for single system not to exceed 40g / year, whilst for double system the leakage rate shall not exceed 60g / year. European regulations are even more stringent; the annual leakage rate shall not exceed more than 15g / year.

Automotive air conditioning refrigerant leakage can be caused by different reasons; it can be divided mainly into external leakage and internal leakage. External leakage occurs mainly in the compressor, the pressure switch connection, the evaporator, the tank and the pipeline connection; internal leakage is mainly caused by the compatibility of the refrigerant and the lubricating oil.

China is now a biggest car market in the world with annual sales over 20 million units, therefore, consumes a considerable amount of R134a both on the servicing and manufacturing sector in MAC.

Project Objectives:

1. To assess the cause and evaluate the current annual refrigerant leakage rate of the mobile air conditioning system.

2. To assess the current level of annual leakage in mobile air conditioning system when R1234yf is used as refrigerant, including both internal leakage and external leakage.
3. Address the cause of refrigerant leakage in automobile air conditioning system through introducing technological improvement.
4. Establish a production line for an optimized automotive air conditioning system; gather demonstration data to propose an industry standards for mobile air conditioning system leakage.

Project Activities:

- Establish mobile air-conditioning system refrigerant test protocol and internal leakage test protocol to assess the current rate of refrigerant leakage and cause of the leakage in domestic vehicles, and prepare an assessment report;
- Assess the current rate of leakage, the annual leakage quantities when R1234yf is used as replacement refrigerant in automotive air-conditioning refrigeration system, and identify the cause of the leakage;
- Based on the findings on internal and external leakage, optimize the design of the automotive air conditioning system;
- Establish an optimized production line for the improved automotive air conditioning systems, generate demonstration data as basis to propose R134a and R1234yf Refrigerant Leakage Standard.

Research Progress and Stage Results

Stage 1:

- Set up automotive air conditioning system refrigerant leakage test protocol and internal leakage test protocol using SAE J2727 standard and JIS-K211 standard to test existing system on external and internal refrigerant leakage level, to assess the existing R134a system refrigerant leakage rate;
- Use R1234yf as replacement refrigerant for R134a and to assess the R1234yf system refrigerant leakage rate;
- Stage results: R134a and R1234yf system refrigerant leakage analysis report.

Stage 2:

- Through results of the test protocol performed on the R1234yf system, identify points of refrigerant leakage;
- Through the compatibility test to determine the compatibility of different lubricants and R1234yf refrigerant, determine the quantities of refrigerant leakage and identify the best lubricants compatible with R1234yf refrigerant;
- Optimize the design of R134a and R1234yf air-conditioning system to achieve reduction in the rate of refrigerant leakage;
- Stage results: optimized R134a and R1234yf system design.

Stage 3:

- Convert a production line to produce the optimized mobile air-conditioning system and establish a set of design and production specifications;
- Gather demonstration data as basis to propose a national standard on R134a and R1234yf refrigerant leakage;
- Stage results: the transformation and establishment of an optimized mobile air-conditioning system that generates demonstration data, and the finalization of a draft document to establish sector standard.

Duration of project implementation: 18 month

Estimated budget of full project proposal: 1 million

Partnership

Nanjing Xiezhong Auto-Airconditioner (Group) Co., Ltd. will carry out the research and optimization of the production line in this project.

Shanghai Jiaotong University Institute of Automotive Engineering will provide technical support to Nanjing Xiezhong in the preparation and implementation of the project.

Funding for preparation: USD 30,000

COUNTRY: China

PROJECT TITLE: Preparation project for a Demo-Project for converting from HFC-245fa to C5+HFOs in a domestic refrigerator manufacturer in China

INTERNATIONAL IMPLEMENTING AGENCY: UNDP

PROJECT DURATION: 12 months

PROJECT COSTS: US\$ 30,000

IMPLEMENTING AGENCY SUPPORT COST: US\$ 2,100 (7%) – UNDP

TOTAL COST OF PROJECT TO MLF: US\$ 32,100

NATIONAL COORDINATING AGENCY: MEP/FECO OF CHINA

A. Background

1. In China, cyclopentane (C5) and HCFC-141b, as the foaming agents, were adopted to replace CFC-11 by the domestic refrigerator industry during the period from 1995 to 2007. Thanks to the implementation of HCFCs phase-out plans in China, HCFC-141b has been almost phased out in the domestic refrigerator sector in recent years. However, HFC-245fa was introduced to replace HCFC-141b to improve the insulation performance to meet the upgrade of energy efficient standard in China. In recent years, the volume of domestic refrigerators adopting HFC-245fa is increased more than 30% annually. It is estimated that approximately 7,000 tons of HFC-245fa is consumed in domestic refrigerator sector in 2016. Now, HFC-245fa, similar with cyclopentane (C5), has become the major foaming agent in the domestic refrigerator industry in China, and it is estimated that the demand of HFC-245fa will be increased rapidly in the future due to the energy efficient standard becoming more and more strict in the future and in the industry development.
2. Since around the year 2011, some domestic refrigerator companies have started to study the use of C5+HFOs foaming technology and commercialized some products in the last 2 years. However, the market share of domestic refrigerator with C5+HFOs is very low in China due to the higher cost compared with HFC-245fa and C5 technology.
3. China is the largest country to produce domestic refrigerator in the world and 70 million units of domestic refrigerators were produced in 2016. The Kigali Amendment of the Montreal Protocol agreed to phase down HFCs will pose a big challenge to China's domestic refrigerator industry due to its huge size and accordingly the huge demand for HFC-245fa.
4. The proposed project is expected to be designed to encourage the use of C5+HFOs technology as foaming agent in domestic refrigerator industry. It will focus on removing or mitigating the barriers for using this non-HFCs technology in this sector. This project will play an exemplary role in phasing-down the huge size HFCs consumed in this sector in China.
5. Moreover, this proposed project is expected to facilitate the country and industries to adopt non-HFCs technologies, as well as to assist the country to explore the efficient management mechanism on phasing down HFCs as foaming agent. This project will provide valuable references for the country and industry to control HFCs to meet the target of the Kigali Amendment in the future.

B. Objective of the project

6. Given the situation of China's domestic refrigerator industry and the HFC-245fa consumption, the goals of this proposed project are shown as follow:
 - ✓ To convert one production line for manufacturing domestic refrigerator from using HFC-245fa to adopting C5+HFOs as foaming agent in a beneficial manufacturer;
 - ✓ To collect the information of ICC, IOC and energy efficiency data of the conversion and share the experiences with other related industries in China and with the Ex.Com.

C. Brief introduction of the beneficiary company

7. In the process of preparing this project concept, UNDP had consulted with relevant governmental agencies in China and the association CHEAA on the matter of choosing the beneficiary company. Considering the R&D

capacity and basic capacity on using C5+HFOs technology, it is proposed that Hisense-Kelon Co., Ltd. To be selected to develop the demo production line as conversion activity. Hisense-Kelon Co., Ltd. is part of the Hisense Group, it is established in 1984 and is a major domestic refrigerator manufacturer in China. Hisense-Kelon has 5 manufacturing factories for domestic refrigerator with annual production capacity of 12.6 million units.

8. It is estimated that 1,200 tons of HFC-245fa is consumed by Hisene-Kelon to manufacture domestic refrigerators. Approximately 200 tons of HFC-245fa will be phased out by this project. It should be noted that the data is estimated and the exact data will be collected during the preparation of the full project proposal.

D. Project activities

9. To meet the targets of this proposed project, the following activities are designed:
 - ✓ A demo project of conversion of the domestic refrigerator production line from HFC-245fa to C5+HFOs as foaming agent in the selected company;
 - ✓ Research on technical formulation of C5+HFOs as foaming agent in domestic refrigerator with cost-effectiveness and tests on insulation performance of C5+HFOs as foaming agent;
 - ✓ Summary of the experiences gained by the demo conversion project, as well as the management on controlling HFC-245fa in domestic refrigerator sector;
 - ✓ Dialog between the domestic refrigerator manufacturers and HFOs suppliers to communicate on the technical demands;
 - ✓ One workshop will be organized to share the technology experiences gained by the demo projects.
10. **Budget for preparing the project document:** USD 30,000 is requested for the preparation of the project document on the Demo-Project for converting from HFC-245fa to C5+HFOs in domestic refrigerator industry in China.

No.	Budget description	Budget (US \$)
1.	National experts	8,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	6,000
4.	Meeting/workshop	7,000
5.	Documentation and information materials	4,000
6.	Total	30,000

E. Schedule

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
Project Start-up					
1.	ExCom Project Approval				
2.	Receipt of Funds				
3.	Project/Grant Signature				
Project Implementation					
4.	Information collection and related survey on-site				
5.	Meeting with the beneficial company and related parties				
6.	Draft the project document				

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No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
7.	Review process				
8.	Finalize the document and submission to the ExCom				

COUNTRY: China

PROJECT TITLE: Preparation project for a Demo-Project for converting from HFC-134a to HC-290 in a domestic freezer manufacturer in China

INTERNATIONAL IMPLEMENTING AGENCY: UNDP

PROJECT DURATION: 12 months

PROJECT COSTS: US\$ 30,000

IMPLEMENTING AGENCY SUPPORT COST: US\$ 2,100 (7%) – UNDP

TOTAL COST OF PROJECT TO MLF: US\$ 32,100

NATIONAL COORDINATING AGENCY: MEP/FECO OF CHINA

A. Background

1. At the 28th meeting of the Montreal Protocol, the Parties agreed to phase down HFCs by adopting an amendment of the Protocol naming the Kigali Amendment.
2. In China, HFCs were introduced as alternatives to CFCs and HCFCs in several sectors, such as residential and commercial air conditioner industry, domestic and commercial refrigeration sector. China is the biggest production and consumption country of Ozone Depleting Substances in all A5 countries. It can be estimated that China possibly is in similar situation in terms of HFCs consumption. If there is no plan developed to encourage the industries to the roadmap of non-HFCs technologies at the same time of HCFCs phase-out, it can be predicted that the cost will be multiplied in order to control HFCs consumption in China in future.
3. The domestic freezer sector in China had the production volume of around 19 million units in 2016 and HFC-134a is one kind of refrigerant used in the sector. However, its consumption is not too large as compared with other sectors. It will thus make it a little easier to develop plans to control HFCs when the country does not establish the management system and capacity on handling this issue. Additionally, some companies have the willingness to replace HFC-134a with HC-290 due to HC-290's excellent cooling performance in domestic freezer products in recent years. However, the market penetration of domestic freezer with HC-290 is very low now without the relevant incentive being put in place.
4. Thus, it is the right industry that we can target to develop the project to demonstrate the production line conversion from HFCs to non-HFCs as refrigerants and the relevant management mechanism for the country.
5. This proposed project selected the domestic freezer industry in China to design the suitable activities for the conversion. This project will promote efforts to control HFCs in this domestic freezer industry, and will deliver an important signal for HFCs phase-down trend to fulfill the obligation of the Kigali Amendment.

B. Objective of the project

6. Given the situation of China's domestic freezer and HFC-134a consumption, the goals of this proposed project are set out as below:
 - ✓ To convert one production line for manufacturing domestic freezer from using HFC-134a to adopting HC-290 in the beneficial manufacturer;
 - ✓ To convert one production line for manufacturing compressors from HFC-134a to HC-290 in a selected company;
 - ✓ To collect the information of ICC, IOC and energy efficiency data of the conversion and to identify the barrier of the conversion.
 - ✓ To disseminate the experience and knowledge gained.

C. Brief introduction of the beneficiary company

7. After consultation with MEP/FECO and CHEAA, it is proposed that Qingdao Haier Freezer Co., Ltd. would be selected to develop the demo production line's conversion activity. Qingdao Haier Freezer Co., Ltd., which belongs to the Haier Group, is established in 2001 and is the biggest domestic freezer manufacturer in China. They have 3 manufacturing factories for domestic freezer with annual production capacity of 7 million units.
8. It is estimated that approximately 50 tons of HFC-134a will be phased out by this project. It should be noted

that the data is estimated and the exact data will be collected during the period of preparing the project document.

D. Project activities

9. To meet the targets of this proposed project, the following activities are designed:
- ✓ A demo project on the conversion of the freezer production line from HFC-134a to R290 in a selected company;
 - ✓ Accordingly, a demo project of the conversion of the compressor production line from HFC-134a to HC-290 in a selected company;
 - ✓ Research and development on domestic freezer and compressor using HC-290;
 - ✓ Research on revising the related safety standards for using HC-290 in freezer product;
 - ✓ Summary of the experience gained by the demo conversion projects, as well as the management on controlling HFC-134a in the domestic freezer sector;
 - ✓ One workshop will be organized to share the technology experiences gained by the demo projects.

E. Budget for preparing the project document

10. USD 30,000 MLF fund is requested for the preparation of the project document for converting from HFC-134a to HC-290 in the domestic freezer industry in China.

No.	Budget description	Budget (US \$)
1.	National experts	8,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	6,000
4.	Meeting	7,000
5.	Documentation and information materials	4,000
6.	Total	30,000

F. Schedule

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
Project Start-up					
1.	ExCom Project Approval				
2.	Receipt of Funds				
3.	Project/Grant Signature				
Project Implementation					
4.	Information collection and related survey on-site				
5.	Meeting with the beneficial company and related parties				
6.	Draft the project document				
7.	Review process				
8.	Finalize the document and submission to the ExCom				

Country:	People's Republic of China
Project Title:	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.
Lead Implementing Agency:	UNDP
Sectors:	Production Sector
Project Duration:	12 months
Preparation cost:	US \$30,000
Implementing Agency Support Cost:	US\$ 2,100
Total Cost of Project to MLF:	US\$ 32,100
National Coordinating Agency:	Foreign Economic Cooperation Office, Ministry of Environmental Protection (FECO/MEP)

Background and Introduction

The Kigali Amendment was adopted by the 28th Meeting of Parties to the Montreal Protocol on 15 October 2016 in Kigali, Rwanda. Under the amendment, countries committed to cut the production and consumption of HFCs by more than 80 percent over the next 30 years. The ambitious phase down schedule will avoid more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050—avoiding up to 0.5° Celsius warming by the end of the century.

Under the Kigali Amendment the Parties to the Montreal Protocol shall report HFC-23 emissions and ensure that HFC-23 emissions generated from production facilities producing HCFCs or HFCs are destroyed to the extent possible using technology approved by the Parties.

Through decision XXVIII/2, the Parties requested the Executive Committee to develop guidelines for financing the phase-down of HFC consumption and production. With regard to the production sector, the costs of reducing emissions of HFC-23, a by-product from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting it to other environmentally safe chemicals, should be funded by the Multilateral Fund (MLF) to meet the obligations of Article 5 Parties.

At its 79th meeting, the Executive Committee invited implementing agencies to submit to the 81st meeting proposals for feasible technology demonstration for HFC-23 by-product mitigation or conversion technologies with the potential for cost-effective, environmentally sustainable conversion of HFC-23 (decision 79/47 (g)).

In order to provide the information to the concerned parties and Executive Committee for their kind consideration, UNDP organized a side event during 39th OEWG in July of 2017, and invited three technology providers to introduce their recent research in this regard. The side event drew a lot of attention from the stakeholders and promoted technology cooperation and transfer among the interested parties.

China has 32 HCFC-22 production lines which produced 534,930 metric tons in 2015. HFC-23 is destroyed, sold, collected and stored or vented to the atmosphere. In 2015, out of the total amount of 13,604 MT of HFC-23 generated, approximately 45 per cent were destroyed (UNEP/OzL.Pro/ExCom/79/48).

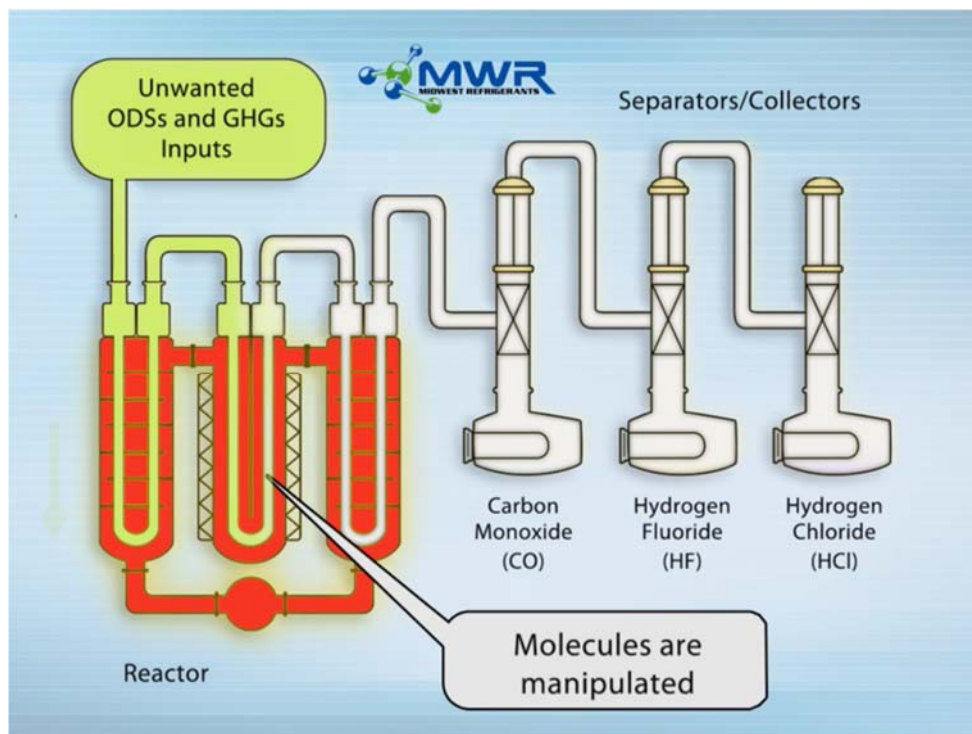
HFC-23 emission is a long-standing and challenge issue to China to fulfill the obligation of the Kigali Amendment, since hundreds of thousands tonnes of HCFC-22 will continue to be produced in China as an important feedstock to produce other chemicals. It's important to demonstrate a sustainable and cost-effective solution to address this issue, other than usual destruction, which is costly in operation and will create wastes in the process.

Conversion Technology in this demonstration project and basic information of the enterprise

Midwest Refrigerants LLC (a U.S. Company) introduced their unique technology at the UNDP side event in Bangkok. This technology is designed to create and recover valuable organic halides from HFC-23 by the Chemical Reaction of Hydrogen (H₂) and Carbon Dioxide (CO₂). First, it separates water (H₂O) to form hydrogen (H₂) and oxygen (O₂). The oxygen (O₂) is reacted with carbon monoxide (CO) to form carbon dioxide (CO₂). The reaction of the hydrogen and the carbon dioxide irreversibly breaks down the HFC-23 to molecular level. Those molecules are reassembled to form anhydrous hydrogen fluoride and carbon monoxide.



The Midwest technology has already been approved as an irreversible technology by UNEP-TEAP in 2011. It has a two-year history of pilot plant operation and computer modeling to prove the technology on a commercial scale. Midwest has completed engineering of a plant for commercial operations, which is ready for construction. The science has been combined with a business model for the HCFC-22 producers, so that the project will eliminate the HFC-23, delivering valuable outputs that are competitively saleable in the marketplace, which could incentivize the HCFC-22 producers to put their efforts behind it as a sustainable solution, compared to the usual destruction by incineration.



Liaocheng Fuer New Material Technology Ltd. is a large state-owned enterprise established in 1992, located in Liaocheng city of Shandong Province. Liaocheng Fuer New Material Technology Ltd. has a HCFC-22 production line with capacity of 20,000 tons/year. It is estimated to generate about 550 tons HFC-23 by-product. HCFC-22 produced by Liaocheng Fuer New Material Technology Ltd. is only for its own feedstock use to produce TFE (10,000 tons/year). The HCFC-22 production line and its downstream facility was established in 2016. They don't have a dedicated incinerator to destroy HFC-23. After knowing the details of the Midwest technology through FECO and UNDP, Liaocheng Fuer New Material Technology Ltd. has decided to conduct a demonstration project for their plant.

Objective of the project:

To demonstrate a cost-effective and environmentally sustainable conversion technology of HFC-23.

Planned demonstration project activities:

- Build a 550 metric tons/year capacity unit for Liaocheng Fier New Material Technology Ltd. to convert its HFC-23 by-product to valuable organic halides using Mid-west technology.
- Pilot run the unit at the Midwest U.S. facility and collect the information on the amounts of HFC-23 converted and its products, AHF and CO.
- Prepare a detailed report capturing ICC, IOC, and lessons learnt to be shared with other HCFC-22 producers.

Estimated budget of full demonstration project proposal:

The estimated budget of the demonstration unit is about 6 million USD. The request to the Multilateral Fund is estimated to be about US \$2.8 million. The Government of the United States is exploring providing additional funding (amount is to be definite before the 80th Ex.Com) to support this demonstration project. Liaocheng Fier New Material Technology Ltd. will provide the co-financing for gap of the capital cost.

Information to be collected during the preparation stage:

- (1) Detailed technical performance and capital cost on the establishment of the Mid-west technology with conversion capacity of 550 tons/year of HFC-23;
- (2) An estimation of the value of the products generated by this technology and its economic feasibility study.

Funding for preparation: US \$30,000

No.	Budget description	Budget (US \$)
1.	Consultant	9,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	10,000
4.	Meeting/workshop	3,000
5.	Translation, documentation and information materials	3,000
6.	Subtotal	30,000
7.	Support cost of agency	2,100
8.	Total	32,100

FUNDING REQUEST FOR THE PREPARATION OF HFC-RELATED STANDALONE INVESTMENTS PROJECTS

COUNTRY: DOMINICAN REPUBLIC

PROJECT TITLE: Preparation of a Project for an HFC-related standalone investment project in the Dominican Republic

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: Ministerio de Medio Ambiente Y Recursos Naturales

PROJECT INCLUDED IN CURRENT BUSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

AREA: Commercial Refrigeration Manufacturing

SECTOR: RAC- CRM

SUB-SECTOR: Stand Alone Self Contained commercial Refrigerators

NUMBER OF ENTERPRISES: one (1)

PROJECT DURATION: 18 months

PROJECT COST: USD 30,000

SUPPORT COST: (7%) USD 2,100

TOTAL COST FOR THE MLF: USD 32,100

Project Summary

This document describes the proposed arrangements, preparation strategy and budget for the preparation of an HFC-related standalone investment project that will support the Dominican Republic to contain the HFC consumption and facilitate the early implementation of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-motivation and consequently would need the agreement of the relevant official(s) of the Ministry of Environment and the national stakeholders to the investment project proposal;
- b) To facilitate seamless early implementation of the Kigali Amendment;
- c) To draw upon the lessons learnt from the project preparation phase and the sector analysis that will support it;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the preparation process.

PREPARATION PROJECT FOR A AN HFC-RELATED STANDALONE INVESTMENT PROJECT IN THE DOMINICAN REPUBLIC

1. INTRODUCTION

The Dominican Republic is a Party to the Vienna Convention and the Montreal Protocol. It is fully committed to the phaseout of HCFCs and willing to take a lead in assessing and implementing new HFC phasedown technologies, particularly in refrigeration applications. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment. The ratification process has already been initiated by the Ministry of Environment and Sustainable Resources. The process of ratification is expected to take less than one year duration.

The Government of the Dominican Republic is implementing Stages I & II of its HCFCs Phase-out Management Plan (HPMP) and has been

- Meeting the HCFCs compliance targets as per the Montreal Protocol;
- Maximizing climate benefits while phasing-out HCFCs;
- Leapfrogging, as feasible, high GWP alternatives;

2. OBJECTIVES OF THIS FUNDING REQUEST

The objective of this document is to request funding for the preparation of an individual investment project for the elimination of HFC in the manufacture of commercial refrigerators;

The HFCs-related Standalone Investment Project will be prepared and submitted to the ExCom appreciation following the guidelines established under the Decisions 78/3(g) and 79/45.

3. OVERVIEW OF THE REFRIGERATION SECTOR

The Ministry of Environment and UNDP commissioned a study on the consumption of ODS alternatives in the Dominican Republic that has been submitted separately to the MFS. There is no manufacture of domestic refrigerators and just two enterpirses that make commercial refrigerators For more information it is referred to the menioned survey.

4. TECHNOLOGY

The selection of an alternative, long-term, sustainable refrigerant technology would be seen to be ruled by the following considerations:

- Proven and reasonably mature technology.
- Cost effective conversion.
- Availability of the systems at favorable pricing.
- Critical properties that must to be obtained in the end-product.
- Energy efficiency.
- Reduced carbon footprint.

Five (5) refrigerant options for the vapor compression cycle in all refrigeration and A/C sectors have emerged (TEAP Report, 2010):

- ammonia (R-717)
- carbon dioxide (R-744)
- hydrocarbons and blends (for domestic refrigeration HC-600a)
- hydrofluorocarbons (unsaturated HFCs (HFOs))
- water (R-718)

These five refrigerant options above are in different stages of development or commercialization. HFOs and HCs are now increasingly being applied. Ammonia enjoys growth in sectors where it can be easily accommodated, and for certain—non-DRM—applications. CO2 equipment is being further developed and a large number of CO2 demonstration installations have been extensively tested on the market. It may well be that CO2 will take a substantial part of the commercial refrigeration equipment market. However, the equipment is too bulky to be applied in DRM. Water is used and may see some increase in use in limited applications.

FARCO has identified R-290 refrigerant (propane) as the eventual substitute for the HFC gases employed in its production. However, there are issues pending related to the maximum refrigerant charge (presently 150 gr) and how this may impact the systems for the larger 3 and 4 door refrigerators and low temperature freezers.

5. COMPANY PROFILE

Fábrica de Refrigeradores Comerciales, (Farco), SRL, was established in 1980 in the Haina Industrial Zone, just west of Santo Domingo, with the purpose of offering regional customers stand-alone self-contained commercial refrigerators. The company is able to provide competitive products and services better adapted to the specific needs of the regional markets.

FARCO has a dominant share in the local Dominican market, catering to the institutional sectors and pioneering the development of refrigerated merchandising techniques. Our company has years of experience in the regional export markets serving Haiti and numerous Caribbean Islands such as Puerto Rico, Jamaica, Trinidad & Tobago as well as Central America and the United States.

Farco equity is 98% Dominican owned.

The product lines manufactured by Farco include Glass Merchandisers, Vertical and Horizontal Beverage Coolers, Reach-In Refrigerators and Freezers, Refrigerated Food Preparation Tables, Refrigerated Work Top and Under counter Units, Pizza Preparation Tables, Back Bar Coolers, Ice Merchandisers, Draft Beer Dispensers, Horizontal Freezers, Sub-Zero Beer Coolers, etc. More information is available on itsr website at www.farcofogel.com.do

6. AMOUNT AND TYPE OF HFC TO BE PHASED OUT

	2012	2013	2014	2015	2016
R-134a	3,169.44	3,168.84	3,169.44	3,169.44	4,753.56
R-404a	174.23	98.00	500.91	65.34	206.90
Total	3,343.67	3,266.84	3,670.35	3,419.90	5,477.70

Year 2017 production is 60% above that of 2016.

7. BUDGET

No.	Budget description	Budget (US \$)
7.	International Experts	9,000
8.	National Consultant	8,000
9.	Information collection, consolidation and analysis	5,000
10.	Meetings, Missions	5,000
11.	Project Proposal	3,000
	Total	30,000

A) Implementation Timeframe

Activities	2017		2018											
	11	12	1	2	3	4	5	6	7	8	9	10	11	
<i>Project Start-up</i>														
1	ExCom Project Approval													
2	Receipt of Funds													
3	Project Document Signature													
4	Consultants Recruitment													
<i>Project Implementation</i>														
5	Data Collection													
6	Consultation Meetings													
7	Draft the project document													
8	Peer Review													
9	Submission to the ExCom													

**FUNDING REQUEST FOR THE PREPARATION OF HFC-RELATED STANDALONE
INVESTMENTS PROJECTS**

COUNTRY: EGYPT

PROJECT TITLE: Elimination of HFC in the manufacture of PU Foam

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: N/A

NATIONAL COORDINATION AGENCY: Egyptian Environmental Affairs Agency (EEAA)

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

AREA: Manufacturing

SECTOR: PU Foam

SUB-SECTOR: Panels, Spray

NUMBER OF ENTERPRISES: one (1)

PROJECT DURATION: 12 months

PROJECT COST: USD 30,000

SUPPORT COST: (7%) USD 2,100

TOTAL COST FOR THE MLF: USD 32,100

Project Summary

This document describes the proposed arrangements, preparation strategy and budget for the preparation of the HFC-related standalone investment projects that will support Egypt to contain the HFC consumption and facilitate the early implementation of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-motivation and consequently would need the agreement of the relevant official(s) of the Egyptian Environmental Affairs Agency (EEAA) and the national stakeholders to the investment project proposal;
- b) To facilitate seamless early implementation of the Kigali Amendment;
- b) To draw upon the lessons learnt from the project preparation phase and the sector analysis that will support it;
- c) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the preparation process.

PREPARATION PROJECT FOR A AN HFC-RELATED STANDALONE INVESTMENT PROJECT IN EGYPT

8. INTRODUCTION

Egypt is a Party to the Vienna Convention and the Montreal Protocol. It is fully committed to the phaseout of HCFCs and willing to take the lead in assessing and implementing new HFC phasedown technologies, particularly in the foam sector—as it did for CFCs in 1992 when it submitted and completed the first foam sector investment projects ever funded by the Multilateral Fund for the Implementation of the Montreal Protocol (MLF). Currently, the country is taking significant steps towards the ratification of the Kigali Amendment. The ratification process has already been initiated by the Ministry of Environment and is expected to be deliberated in the Cabinet before approval by the Parliament. The process of ratification is expected to take less than one year duration.

Ministerial Decree No. 77 of 2000 issued by Egypt's Ministry of State for Environmental Affairs prohibits the importation of all ODS, including HCFCs, without a permit issued by the Egyptian Environmental Affairs Agency (EEAA). In addition, Decree No. 139 of 2003 issued by the Ministry of Trade and Industry bans imports of new and used equipment containing ODS.

Minister of State for Environmental Affairs issued Decree No. 80 of 8th April, 2013 for the re-establishment of the National Ozone Committee with the mandate of assisting the Egyptian Environmental Affairs Agency in the implementation of Egypt's obligations, by selecting the mechanism to regulate the import and export of quantities of ozone-depleting controlled substances to achieve schedules of gradual reduction, in order to ensure verification of compliance by Egypt with the provisions of the Montreal Protocol to protect the ozonelayer.

The quota system for Egypt is unique as compared to most other countries. As per Article 4 of the National Law for Competition Protection and Combating Monopoly Practices (Law no. 3 of 2005 and its 2010 amendment), no company can have more than 25% of the market share, and as per Article 6, Agreements or contracts between competing Persons in any relevant market are prohibited if they cause any of the following: b) Dividing product markets or allocating them on ground of geographical areas, distribution centers, type of customers, goods, market shares, or seasons or periods of time. In view of this, the National Ozone Committee sets the maximum quota allowed for Egypt for the year based on the HPMP Agreement. Imports are approved on a first come first served basis, with a limitation of 2 containers/ISO tanks per approval, and next approval for the same importer is given after showing proof of import of previous shipment. However, manufacturers are excluded from the 2-container limitation with the understanding that growth over the years is not allowed.

The NOU maintains a database of maximum import allowed by the country for the year, as set by the National Ozone Committee. As pre-shipment approval is given to an importer, the quantity is noted. After goods are imported, the importer provides all documentation to NOU and receives the clearance letter advising Customs that the consignment may be released. This quantity is noted in the database, and the balance from the national quota is calculated. If the total of the pre-shipment permits issued reaches the maximum of the quota, no additional pre-shipment permits are issued until the actual import data is available and checked if there is any balance left. This situation has not happened till date as imports have been less than the available quota for the year.

The Government of Egypt is implementing the Stage I & II of its HCFCs Phase-out Management Plan (HPMP) and has:

- Meeting the HCFCs compliance targets as per the Montreal Protocol;
- Maximizing climate benefits while phasing-out HCFCs;
- Leapfrogging, as feasible, high GWP alternatives;
- Synchronizing with relevant parts in the national development;
- Minimizing impacts on the consuming sectors and end users;
- Involving all relevant stakeholders and ensure ownership of activities; and

- Adopting robust, but doable, policies and work-plans under the HPMPs

9. OBJECTIVES OF THIS FUNDING REQUEST

The objective of this document is to request funding for

- the preparation of an individual investment project for the elimination of HFC in the manufacture of PU Foam;
- the survey of the PU foam industry on the use of any other use of HFCs.

The HFCs-related Standalone Investment Project will be prepared and submitted to the ExCom appreciation following the guidelines established under the Decisions 78/3(g) and 79/45.

10. OVERVIEW OF THE PU FOAM SECTOR

There is currently no information on the consumption of HFCs in Egypt due to the lack of any surveys in this area. The polyurethane foam (PU) is, however, well surveyed—the last time as part of the HPMP-2 which contains an HCFC-141b phaseout plan for the entire PU foam industry. From previous projects it's known that at least one PU foam company uses HFCs.

The PU foam industry plays a significant role in the economy of Egypt. The key areas of application in Egypt are in rigid and, to a lesser degree, integral skin products, including domestic refrigerators and freezers, commercial refrigeration equipment, insulated truck bodies, insulation panels for diverse applications, electric water heaters thermoware products, spray foam in construction and other insulation applications, decorative articles and window frames, pour-in-place applications and automotive, furniture and other applications

Apart from the domestic refrigeration manufacturing, Egypt's foam manufacturers heavily depend on chemical and technology supply through system houses. These provide ready to use PU systems consisting of a component "A" (a fully formulated polyol system or FFS) and a component "B" (isocyanate, in this case MDI). The two components, when brought in contact and thoroughly mixed, create a foamed polymer with the desired product properties. They are able to incorporate a large range of blowing agents but leave the choice generally to the customer/end-user. Those system houses, however, not preblend cyclopentane, the phaseout compound of many Egyptian PU foam enterprises.

11. TECHNOLOGY

Current HFC use in A5 countries is relatively small and mostly restricted to co-blending. High price is the motivator to stay as much as possible away from HFCs. However the use as co-blowing agents to reduce density in HCO blowing foams is rising sharply as the reduction in density makes up the higher price.

There are currently three HFCs used in foam applications. Following table includes the main physical properties of HFCs can be used in Foams:

Table-1 – Main Properties of HFCs used in PU foams

Parameter	HFC-134a	HFC-245fa	HFC- 365mfc
Chemical Formula	CH ₂ FCF ₃	CF ₃ CH ₂ CHF ₂	CF ₃ CH ₂ CF ₂ CH ₃
Molecular Weight	102	134	148
Boiling point (°C)	-26.2	15.3	40.2
Gas Conductivity (mWm ⁰ K at 10 °C)	12.4	12.0 (20 °C)	10.6 (25 °C)
Flammable limits in Air (vol. %)	None	None	3.6-13.3
TLV or OEL (ppm)	1,000	300	Not established
GWP (100 y)	1,410	1,020	782
ODP	0	0	0

12. HFC CONSUMPTION

As mentioned, the use of HFCs in foam applications is very small. While this project preparation plan will review HFCs use in this industry in depth, preliminary search showed at least one company is using it in production and a few others just in an early trial stage. The search did not include refrigeration applications, however, widespread as of yet not surveyed.

13. COMPANY PROFILE

The Government of Egypt submitted in November 1996 a proposal to phaseout the remaining use of CFCs in the Egyptian foam industry. This proposal was approved in May 1997. The project included a component to support the Army's Construction Factory in its phaseout CFC phaseout program. (EGY/97/G66 – Phaseout of the Remaining ODS Consumption in the Foam Sector, Sub-project Army Factory). The company produces PU panels an PU spray/PIP foam. The challenge at that time was that the army was not allowed to use interim technologies nor flammable blowing agents. The limited choice led to the use of HFC-134a which was directly injected.

The intended technology is the use of liquid HFOs but this needs first to be discussed and checked against current safety policies.

The Army factory undertakes construction projects for the Egyptian army. The PU foam activities focuses on sandwich PU panels for construction applications such as cold stores, prefab housing for defense and other uses. Spray/PIP foam is used for the same purpose as well for repair activities. The factory is located at the outside of Cairo, Egypt.

7. BUDGET

No.	Budget description	Budget (US \$)
8.	International Experts	9,000
9.	National Consultant	8,000
10.	Information collection, consolidation and analysis	5,000
11.	Meetings, Missions	5,000
12.	Project Proposal	3,000
	Total	30,000

8. Implementation Timeframe

Activities	2017		2018										
	11	12	1	2	3	4	5	6	7	8	9	10	11
<i>Project Start-up</i>													
1	ExCom Project Approval												
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6	Consultation Meetings												
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8	Peer Review												
9	Submission to the ExCom												

**FUNDING REQUEST FOR THE PREPARATION OF HFC-RELATED STANDALONE
INVESTMENTS PROJECTS**

COUNTRY: ZIMBABWE

PROJECT TITLE: Elimination of HFC-134a in the manufacture of domestic refrigerators

LEAD IMPLEMENTING AGENCY: UNDP

COOPERATING AGENCY: n/a

NATIONAL COORDINATION AGENCY: Ministry of Environment, Water & Climate

PROJECT INCLUDED IN CURRENT BUSSINESS PLAN: No

ELIGIBLE CONSUMPTION: n/a (HFCs)

AREA: Manufacturing

SECTOR: Refrigeration and Air Conditioning

SUB-SECTOR: Domestic Refrigeration

NUMBER OF ENTERPRISES: one (1)

PROJECT DURATION: 12 months

PROJECT COST: USD 30,000

SUPPORT COST: (7%) USD 2,100

TOTAL COST FOR THE MLF: USD 32,100

Project Summary

This document describes the proposed arrangements, preparation strategy and budgets for the preparation of the HFC-related standalone investment projects that will support Zimbabwe to contain the HFC consumption and facilitate the early implementation of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently would need the agreement of Ministry of Environment and the national stakeholders to the investment project proposal;
- b) To facilitate seamless early implementation of the Kigali Amendment;
- c) To draw upon the lessons learnt from the project preparation phase and the sector analysis that will support it;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the preparation process.

Background

1. The Government of Zimbabwe acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment. The ratification process has already been initiated by the Ministry of Environment, Water and Climate and is expected to be deliberated in the Cabinet before approval by the Parliament. The process of ratification is expected to take less than one year duration.
2. The Government of Zimbabwe has successfully phased-out CFCs in the Refrigeration and Air-conditioning (RAC) sector, Methyl Bromide in the agricultural sector (tobacco seedlings, cut flowers and stored grain fumigation), Carbon Tetrachloride and Methyl Chloroform in the solvents sector and Halons in firefighting. Since 2004, the Government of Zimbabwe has been implementing a licensing system for the control of ODS imports. The ODS regulations were reviewed in 2011 to ban imports of CFCs, CTC and Halons and again in 2016 to ban imports of Methyl Bromide and Methyl Chloroform in accordance with the phase out schedules under the Montreal Protocol. The country has a well-established and enforceable Quota and Licensing system to control the consumption of HCFCs in the RAC sector. The National Ozone Unit implements the quota system in coordination with the Customs Officers who are stationed at all ports of entry across the country. Environmental Officers assist the NOU in enforcing the ODS regulations with regards to the use, storage, handling and disposal of HCFCs and HCFC based appliances.
3. The Government of Zimbabwe is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has:
 - (a) Complied with the 2013 HCFC freeze requirements;
 - (b) Complied with the 2015 10% HCFC reduction in consumption;
 - (c) Has timely reported Article 7 data to the Ozone and MLF Secretariats; and
 - (d) Has conducted several training workshops for refrigeration technicians and Customs officers
4. Customs Officers at all ports of entry were trained in controlling and monitoring ODS trade. The training includes the detection of smuggling schemes, identification of ODS consignments, labeling and packaging, use of Customs checklists and use of refrigerant identifiers. A total of sixteen (16) refrigerant identifiers were distributed to all ports of entry and this has resulted in improved HCFC controls and a number of seizures of illegally imported HCFC consignments which demonstrates the very functionality of the system.
5. Refrigeration service technicians have been trained in Good Refrigeration Practices and safe use of HCFC alternatives. The training workshops have been conducted at all the Technical Colleges and within specialized training centres of important RAC service companies. This has resulted in the adoption of CFC and HCFC alternatives in the RAC sector. Zimbabwe has well established refrigeration appliances manufacturing companies that export equipment to neighboring countries. The consumption of HCFCs and HFCs is significantly higher compared to most of the developing countries within the region. The HCFC baseline level is 17.8 ODP tonnes. The most commonly used HCFC is R-22.

A.1) Preliminary analysis of the Domestic Refrigeration Manufacturing Sub-Sector

6. The ODS Alternatives survey was conducted in response to decision XXXVI/9 which provided for Article 5 countries to receive financial assistance from the MLF to carry out surveys to better understand their historical consumption and predict future consumption trends of ODS Alternatives in different sectors and sub-sectors. The survey was conducted in accordance with the MLF guidelines.
7. The use of refrigeration and air conditioning equipment is expanding as the people of Zimbabwe gradually improve their socio-economic status in line with global trends. Most households in urban centers have refrigeration appliances and those in medium to low density suburbs have installed air conditioning units. Most of the refrigeration and air conditioning appliances depend on pure and blended HFCs, with some very limited domestic refrigerators being imported using HC-based refrigerants.
8. The domestic refrigeration sub-sector in Zimbabwe is dominated by R-134a refrigerant which is used in servicing and manufacturing of most standalone units, such as fridges and freezers. Except for 2012, which had a high usage of R-134a in manufacturing of domestic appliances, there was a steady rise from 2013 to 2015 in the use of R-134a from 4.4 MT to nearly 7 MT in manufacturing alone. The increase in usage of this refrigerant has been caused by its availability at low cost and availability of R-134a based appliances locally from manufacturing companies and from neighboring countries.
9. The use of R-600a in domestic refrigeration is slowly gaining momentum. Most imported domestic fridges are charged with R-600a and this results in pressure over servicing and import of HCs. In 2015, 0.9 MT of R-600a was imported and this is expected to rise in the coming years as the needs HC refrigerants increase.

B) Preliminary HFCs Consumption Data

Table 1 – HFCs Consumption per Sector (metric tonnes)

Substance	2012				2013				2014				2015			
	RAC		PU Foam	Fire fighting	RAC		PU Foam	Fire fighting	RAC		PU Foam	Fire fighting	RAC		PU Foam	Fire fighting
	Man.	Serv.			Man.	Serv.			Man.	Serv.			Man.	Serv.		
HFC-134a	16.7	11.6			6.23	24.17			10.2	22.88			11.37	24.11		
HFC-227ea/365mfc				0.6				0.6				0.64				0.65
R-404A	2.68	6.94			2.75	10.95			2.77	19.98			2.98	26.82		
R-407C		1.36				1.45				2.37				2.48		
R-410A		42.96				45.06				46.15				48.10		
R-507A		0.54				0.82				1.09				1.64		
HFO-1234yf		0.023				0.027				0.031				0.036		
HC-290		0.33				0.54				0.30				0.75		
HC-600a		0.38				0.58				1.16				1.09		
Pentanes (C, N, I)			0.0				0.0				0.0				24.6	
R-744		3.10				3.50				3.80				4.50		
R-717		15.40				15.50				15.80				16.20		

Source: ODS Alternatives Survey (2017)

C) Objective of this Funding Request

10. The objective of this document is to request funding for the preparation of an Investment Project for the elimination of HFC-134a in the manufacture of domestic refrigerators. The HFCs-related Standalone Investment Project will be prepared and submitted to the ExCom appreciation following the guidelines established under the Decisions 78/3(g) and 79/45.

D) HFCs-related Standalone Investment Project Preparation Strategy

C.1) Company Profile:

11. In 1966, Capri Group Limited it started its refrigerator and chest freezer manufacturing under the brand “Atlantic”, later renamed into “Capri” brand name as it is known now. Since that time, Capri has continued to upgrade its manufactured range of 10 models consisting of refrigerators and chest freezers that offers consumers a variety of choice to suite the new modern home finishes. Never losing sight of the world market Capri makes sure that its’ models and designs remain competitive and in line with current market trends and demand and by investing in state of the art machinery Capri will continue to do just that.

C.2) Information to be collected during the preparation process:

- Detailed company profile, ownership and commercial/financial data;
- Technical information (confirmation) on consumption of HFCs, number of production lines, evaluation of production process, outputs and profile of appliances produced;
- evaluation on potential alternative technologies to HFC-134a, consultation process with Government and Company on reconversion process and technology choice;
- preparation of full standalone project proposal. Peer review and submission to the ExCom.

E) Budget Description

No.	Budget description	Budget (US \$)
1.	International Experts	9,000
2.	National Consultant	8,000
3.	Information collection, consolidation and analysis	5,000
4.	Meetings, Missions	5,000
5.	Project Proposal	3,000
	Total	30,000

F) Implementation Timeframe

Activities	2017		2018										
	11	12	1	2	3	4	5	6	7	8	9	10	11
Project Start-up													
1	ExCom Project Approval												
2	Receipt of Funds												
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